# Oil, Paint and Drug Reporter.

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WEDNESDAY, AUG. 28, 1889.


## LEADING TOPICS THIS WEEK.


The position of cascava sagrada.
American window glass prospects.
Will the English seed crushers combine?
That Salt Company.
An unsatisfactory lard market.
The depression in the chalk market.
American nitrate of soda.
The petroleum market.
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An Inter-State Commerce decision.
Mr. Theodore Weicker honored.
White lead delivery points.
Still importing glass workers.
American plate glass.

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## WEEKLY REVIEW.

The money market has been active during the past week. The rate for call loans has ranged from 6% to 2% and closes at 3%. Time loans rule 5% for 30 to 60 days and 6% for 4 to 6 months.

The supply of commercial paper is good but the demand is very light. We quote 60 to 90 days indorsed bills receivable at 5½@6, first class four months commission house names at 6 and good, single names (jobbers) having four to six months to run at 6½@7½. Following are the rates of exchange on New York: Savannah, buying 1-16 discount, selling ⅛ premium Charleston, buying par, selling par@⅛, premium. New Orleans commercial, 50c per $1,000 premium; bank at $1 25 per $1,000 premium; St. Louis, 50c per $1,000 discount; Chicago, 25c per $1,000 discount. Sterling exchange is dull and lower.

| | | | |
|---|---|---|---|
| Sterling, 60 days, nominal | $4 84 | @4 84½ |
| sight, nominal | 4 87 | @4 87½ |
| 60 days, actual | 4 83½ | @4 84 |
| sight, actual | 4 86¼ | @4 86¾ |
| Cable transfers | 4 86¾ | @4 87¼ |
| Commercial, 60 days | 4 82 | @4 82½ |
| Paris 60 days | 5 21¼ | @5 20⅜ |
| sight | 5 18¾ | @5 18⅛ |
| com., 60 days | 5 23⅛ | @5 22½ |
| com., sight | 5 20⅝ | @5 19⅜ |
| Antwerp, 60 days | 5 23¾ | @5 23⅛ |
| Swiss, 60 days | 5 21⅝ | @5 21¼ |
| sight | 5 19⅝ | @5 18¾ |
| Reich marks (4) 60 days | 94½ | @94⅝ |
| (4) sight | 95 | @95⅛ |
| (4) nom., 60 days | 94¼ | @94¼ |
| (4) com., sight | 94⅝ | @94¾ |
| Guilders, 60 days | 40 | @40 1-16 |
| sight | 40 3-16 | @40¼ |
| com., 60 days | 39 13-16 | @39⅞ |
| com., sight | 40 | @40 1-16 |
| Copenhagen, Stockholm and Christiana, Krons, 60 days | 26¾ | @26¾ |
| sight | 27 | @27⅛ |

## AMERICAN WINDOW GLASS PROSPECTS.

As the time for starting up the window glass furnaces for the season of 1889–90 draws nearer the problems which agitate the minds of manufacturers become more complicated, and consequently more interesting to the jobbing trade. The usual disagreement between the workers and the employers over the scale of wages for the next fire made its appearance in due time in the west, and is now one of the most actively interesting features of the situation. The workers are apparently firm in their determination to prolong the shut-down unless the manufacturers accede to their demands for the restoration of the five per cent reduction from their wages made two years ago, and pay them a higher rate on certain sizes. The manufacturers are equally determined to adhere to their position, and unless some compromise is reached a strike or lock-out seems to be inevitable.

At present there is small prospect that either party to the contest will give in sufficiently to admit of an adjustment of the question. The workers evidently believe, and in fact some of them have asserted that they have only to remain firm to bring the employers to terms. To many manufacturers, on the other hand, a strike, which at any other time would be a calamity, would at this juncture be one of the most acceptable things that could happen. It is certain that the majority of the manufacturers have looked forward to the coming season with serious apprehensions. To some the future threatens disaster, and possibly financial ruin, while the most sanguine expect to lose money unless something unforseen occurs to prevent the continuance of the excessive and ruinous competition that has marked the past two or three seasons.

The inevitable conclusion to be drawn from the attitude of the western manufacturers on the wage question, is that they see in this dead-lock an opportunity to avert the consequences that would be sure to follow the resumption of work at the usual time. If the shut down can be prolonged until the accumulated stock at the factories and in the hands of dealers is worked off, they would then stand a chance of finishing the season without suffering the heavy losses that must result from an immediate start. These conclusions are forced by the present apparently demoralized state of the trade, and the utterances of manufacturers in public and at their private conferences.

There is, however, another phase of the situation, that under any circumstances would tend to increase the feeling of uneasiness that troubles the majority of the manufacturers, but which at the present time exerts a most depressing influence upon those who might otherwise take a more cheerful view of the situation. It cannot be disposed of in the same manner as the other difficulties which beset the glassmakers; on the contrary, its effects would be intensified by the remedial measures that might be adopted for other evils. This bugbear is the growing importance of the tank system. If the pot furnaces remain cold, the tanks will seize the opportunity to tighten their hold upon the trade. It has, therefore, become a question in the minds of some of the old style manufacturers whether it is preferable to make terms with the workers and start up at the usual time, thereby encountering the risk of heavy losses, and possibly bankruptcy, in the end, or remain idle while the tanks multiply and invade the field of the pot furnaces.

The uncertainty on this point predisposes many who have heretofore opposed close combinations, or even ordinary agreements, for the maintenance of prices, to listen more kindly to some of the projects which are offered as solutions of the problem presented by over-production and extreme competition. At the recent meeting of the Western Window Glass Manufacturers' Association a scheme was presented that appears to have received the approval of many in attendance, but as yet the details of the plan have not been made public, and it is doubtful if it will obtain enough support to insure a practical trial. The amalgamation of New York State and a few outside manufacturing interests, which was avowedly founded with the object of ultimately gaining control of the entire glass producing capacity of the country, has of late made progress toward the attainment of that object, and the possibility, if not probability, that it will become a formidable competitor of the Western manufacturers, furnishes a strong reason why an increasing number of the latter are favorably disposed toward a combination on somewhat similar lines.

At the present time the situation is one of extreme uncertainty. With so many conflicting interests to be harmonized, and such a variety of opinions as to the manner in which it could or should be done, there is hardly enough time remaining in which a solution satisfactory to all can be reached, and it still looks as though the coming fire, even if postponed by the threatened strike, will be attended with all of the worst phases of preceding seasons.

## CASCARA SAGRADA.

The fact that there is a much firmer feeling among the holders of cascara sagrada bark in the markets of the Pacific coast than is evinced by the dealers in New York may be taken as an indication that the center of operations has been transferred to this market, the latter being the better supplied since the season on the coast is practically ended. From various accounts there must be a large stock of bark here or to arrive on contract, and though a not insignificant quantity seems to be of a quality that will hardly pass muster as prime, judging by the frequent rejections of stock tendered as contract deliveries, there is probably more than enough high grade bark to meet the requirements of trade.

The heavy decline in prices since stocks began to arrive in considerable quantities at distributing points bears out the prediction made early in the season that the supply would be excessive, the extreme prices realized last year having been a sufficient incentive for the gathering of a big crop. A few figures are obtainable which substantiate the opinion presented by the REPORTER last spring. It is estimated that the world's consumption of cascara sagrada amounts to about four hundred thousand pounds per annum, but the actual quantity is probably something less than this amount. The receipts of the bark at this port cannot be ascertained even approximately, though a tolerably accurate guess might be made of the quantity now held here. From reliable sources we learn that one commission house on the Pacific coast has recently handled two hundred thousand pounds of cascara and as there are several California and other western firms doing as large if not a larger business in the bark as first hands it may safely be said that at least five hundred thousand pounds have been marketed by them this season. Allowing that some of this stock may have been turned over by them several times, but adding the bark handled by smaller dealers, there would still be a considerable surplus over the actual requirements of consumption.

In spite of this apparently bearish feature of the situation there seems to be an effort making here to concentrate the spot supply, with a view to forcing up prices before the export demand has been satisfied. The inquiry from abroad, so far, appears to have been disappointing, for although a considerable quantity of bark, measured by former standards, has been shipped to the other side this year, there has not been that display of anxiety on the part of European buyers to secure stock that was expected in consequence of their eagerness to buy toward the close of the last season. The foreign buyers, too, are more exacting in their requirements, and decline to accept bark such as they bought with avidity when prices were high. Hence the numerous rejections of late. Except for the recent speculative inquiry, the instigators of which are credited with showing a disposition to take anything obtainable within their limits, there is no demand but for prime thin bark. The latter is said to be scarce but if, as stated by authorities, the opinion is spreading that the properties of thick bark are identical with those heretofore ascribed solely to the thin variety this fact should make little difference in the general result.

## WILL THE ENGLISH SEED CRUSHERS COMBINE?

Two weeks ago the REPORTER referred to the attempts now being made in England among linseed crushers to organize a stock company in the form of a Trust, in order to regulate production and prices and prevent the industry from losing ground which now seems to be a general cause for complaint. The movement is watched with considerable interest on this side of the Atlantic, as it promises to have an important bearing on seed, but from what can be learned the prospect of a combination is not very encouraging. A gentleman who arrived a few days since from the scene of operations in England, and who is connected indirectly with the linseed business, informs the REPORTER that the proposed scheme received such a cold reception that the effort to organize on a new basis has been temporarily abandoned. He gives as a reason that the old concerns, the business of which has been handed down from father to son, are not favorably disposed to the introduction of innovations, and that they are already on record as opposing the combination method. Some of the better known and long established firms have enjoyed a prosperous career and are yet realizing a handsome profit while other manufacturers are sinking money. The former argue that they are not in the market as humanitarians to assist those who are unable to make their plants pay, and that it would be better for the industry if the dissatisfied parties would relinquish their hold of the business and give a practical demonstration of the workings of the natural law of the survival of the fittest. It would therefore appear that the promoters of the scheme will experience more difficult work than they anticipated. No doubt similar obstacles were met with by the originators of the Linseed Oil Trust at Chicago, but the American idea of accomplishing results is different from the English, and probably the foreign crushers will solicit advice how to proceed if they have not done so already.

There are sixty-four seed crushing firms in England, fifty being located in Hull, five in London, two in Liverpool and seven scattered at smaller ports. The majority of the plants manufacture cotton oil from Egyptian seed, also rape oil, and poppy oil, in addition to linseed oil, the latter being the most important article in the list. It is proposed to purchase the mills at their actual value in cash, and this proves to be the principal snag which the committee has encountered, as no valuable

property is purchasable unless an additional consideration is given. Combination on other principles is also opposed because of business jealousy.

Our informant states that a better understanding among foreign crushers of linseed would materially benefit American buyers of seed, as the Calcutta, South American and Russian crops are too large to be controlled in England, but a combination of such influence could dictate prices on the raw material and prevent the market from advancing beyond their views by discouraging speculation.

Notwithstanding the lack of enthusiasm, the committee of three prominent crushers mentioned in a previous issue as being engaged in the missionary work, will not forsake the original idea, but for the present the parties interested will be given an opportunity of considering the plans and suggesting others.

### THAT SALT COMPANY.

In a recent interview a prominent gentleman who, although not an officer of the defunct North American Salt Company, is closely identified with it, analyses the causes of the failure of the project, while attempting to show that it is not dead but sleeping. His argument in support of the assertion that the scheme is certain of ultimate success, is ingenious but it contains nothing new. It is admitted that the existing salt producing interests need organizing or at least that the necessity for the application of a remedy to the evils of over production and excessive competition is indicated, but it is quite evident the scheme in which this gentleman and other financiers are interested does not afford the proper remedy.

The comparison of the salt scheme with successful institutions founded upon somewhat similar lines, in which he indulges, might convince the uninitiated of its feasibility, but those who know the conditions upon which those institutions depend for success know that under the most favorable circumstances the salt interests could not attain success in the same way. The *bete noir* of the proposed great salt company—the unlimited generosity of nature in supplying mankind with one of the primary necessities of existence—precludes the possibility of placing that concern on a parity with the two great undertakings he mentions, which are untrammelled by uncontrollable natural conconditions.

The salt company's advocate attributes the early failure of the attempt to float the concern to the short time allowed for the subscription books to remain open, thus preventing investors from making those inquiries into the stability of the project that are suggested by the natural caution of Americans. It, however, did not take more than the three days allowed for this operation for American investors to see through the gauzy fabric of the salt scheme and had the books remained open for three weeks instead of three days the result would no doubt have been the same.

The gentleman occupies the space of two columns of fine type to present his argument to the public, entering into an elaborate exposition of methods by which the next attempt to launch the scheme may be made successful. Much that he says, particularly in relation to the impossibility of a monopoly in salt producing, in this country, has the appearance of good judgment and sound sense, and might bring to conviction minds unacquainted with the real status of the question shorn of the ingenious advertising verbiage which permeates the interview from beginning to end. It is not likely, however, to have any other effect upon those who know the facts than to increase their belief that such enterprises as this are very good things to leave alone.

### AN UNSATISFACTORY LARD MARKET.

There is general complaint in the lard trade about the low prices prevailing for that product and of the conditions which favor buyers to the detriment of manufacturers. It is not a pessimistic growl of discontent but a well founded complaint which is the natural outcome of circumstances incident to large crops of corn and hogs, speculation and competition. To these causes are to be attributed the present unsatisfactory situation of the market for lard and greases. Considerable stress is laid on the fact that the yield of corn and hogs this season will be unusually large, and the prospective results have already been discounted in speculative circles at Chicago, where all the fluctuations are first recorded. We hear it stated that efforts are being made to "shake out the September clique in lard," which means a change in values to accomplish the purpose, and when the so-called clique is ready to retaliate the market will doubtless be influenced to serve another speculative deal, while the legitimate trade has to suffer from these periodical gymnastic feats in the commercial arena. Competition is also a growing source of dissatisfaction, as some concerns are alleged to have sold crude lard below cost and to solicit a continuance of orders at ruinous rates, in order to get custom. It would seem, therefore, that a combination of circumstances is working against the lard interests, and that the balance of this year at least will not witness any material improvement in that direction, if, indeed, the situation is not made worse by a more emphatic illustration of cause and effect. The refiners of lard are not feeling the burden so much as the less fortunate concerns identified with the crude interests, although the violent fluctuations in the raw materials render future calculations uncertain.

About this time last year Western steam lard, which is the base of speculation, was in a very sensitive position and ascended the scale rapidly until 12 cents per pound was reached in September; it had opened the year at 8⅝c. and closed in December at 7½c. The record during the past six months makes quite a contrast, and although 6 35c. is the markat value at present, it is questionable if that rate can be long maintained in the face of disagreeable facts. But manufacturers should not despair of receiving better returns, as the present season is merely a repetition of experiences in 1886, which opened at 6½c. and closed at 6⅝c., the highest figure realized during that year being 7½c. Fluctuations in 1887 favored sellers, the lowest point reached being 6½c. and the highest 8c.

Lard stearine is difficult to sell at the moment at 7⅛c, while one year ago it commanded 12½c., and at the opening of this year was in good demand at 9c. The range of prices during 1887 was between 7⅛@8⅝c., and in 1886 the market touched 8½c., but the fluctuations were principally confined to 6⅛@7½c. Oleo stearine now quoted at 6c for the best grades, was sold at that figure during the greater part of 1886 and did not get above 6⅞c. during the whole of 1887, the average price being 6½c, but last year it rapidly advanced to 10½c. and fell like a rocket to 7½c.—the closing quotation for the year.

Tallow is making for itself a record independent of lard, on account of a liberal export demand which is likely to cause a gradual advance, as supplies of prime city are not equal to the wants of shippers, and the market in consequence is not burdened with stocks in store as was the case in 1886, when values ranged between 4½@5c.; compared with the present figure of 4¾c. there is room for a material appreciation. The year of unsatisfactory prices was 1887, when the highest point reached was 4½c., but compensation was afforded by the fact that an unusually steady feeling prevailed during most of the time. Last year saw tallow selling at 6⅝c., caused by a natural reaction from 4⅝c., and if it were not for the comparatively low rate of kindred articles, the market could go by easy stages to six cents during the present season, but such a figure is not looked for.

### THE DEPRESSION IN THE CHALK MARKET.

The chalk market is in an almost unprecedentedly depressed condition, there being absolutely no trading at the moment. While there cannot be said to be any surplus here unsold, yet as dealers on all sides are plentifully supplied, they take no interest whatever in the article. This state of affairs has been brought about by a combination of circumstances, the most prominent of which has been the recent heavy arrivals of supplies on a market that was already well stocked, thereby causing the shipments to be disposed of at low figures. These lots, it may be mentioned, were originally contracted for by certain whiting manufacturers, but being sold "without a vessel" the shippers were unable to procure freight room at the proper time and the goods were shipped from London at a date subsequent to the time they were to be delivered at this port, consequently they were rejected on the original contract. That dealers should be so plentifully stocked, is attributed to the fact that during the fore part of the year prices, owing to the high rates of freight abroad, were at excessive figures and dealers subsequently took advantage of a falling market and made contracts freely, little anticipating that the market would go as low as it is to-day. The lack of demand in the whiting market has also contributed, to a certain extent, to the present situation of affairs. The claim by some that the article could not be laid down here at a less price than $2.75, would not seem to be borne out by the facts, as according to recent advices from London, freights have further declined, 5s. to 6s. being talked of to New York, which would make chalk cost, according to recent quotations from the same place, about $1.75 laid down here. As an explanation of this further break in freights, dealers assert that the shipments of cement have not been so brisk from London as in former years. The indications point toward a continuance of the present stagnation for some little time at least, as it is not thought probable that the whiting industry will be favored with an immediate active movement, and the chalk men are quietly awaiting results.

### AMERICAN NITRATE OF SODA.

Some person interested in Nevada lands has sent out broadcast a report to the effect that the present imports of nitrate of soda will be materially decreased if not absolutely dispensed with by the development of valuable deposits on the Central Pacific Railroad in Nevada. It is claimed that an English prospecting party has secured control of the deposits, and that an expert from Chilli will assist in the work of development. This is all the information that is volunteered at the present time, but it may be followed by the prospectus of a company to be floated in New York and London. Some years ago a similar report was circulated from the same section of country but an investigation disclosed the fact that the veins were so irregular and the deposits of such limited quantity that it was found unprofitable to work them. The organization of so many nitrate companies in the English metropolis probably influenced a return to the neglected Nevada fields with the hope that foreign capital can be found to invest in such American uncertainties as the one described.

Dealers and consumers would not object to home supplies of nitrate, but they are evidently far from realizing the truth of the assertion that imports will be greatly restricted or stopped, as the question of freights from Nevada has to be considered, should the article be developed in large quantities, as sulphur, ozokerite wax and other commercial staples are prevented from reaching Eastern markets from the far West, on account of the transportation rates.

A short time since we had occasion to speak of the increased use of nitrate in the manufacture of artificial fertilizers. It appears that the Southern States are favoring nitrate to a greater extent probably than any other mineral for that purpose, and this has been demonstrated by the statements of shippers, one of whom says:

"Up to this year Charleston has never taken more than one cargo of nitrate, but in 1889 we have succeeded in placing four cargoes, and have an inquiry for another. Hitherto great difficulty has been experienced by manufacturers in getting their artificial manure sufficiently dry for the distributors when mixed with nitrate of soda. Now, however, we learn that they have entirely overcome this difficulty, and the consequence is, as we have said, that they have taken four or five times as much nitrate of soda this year as in the past, and we think there is every prospect of a still further increase in the consumption."

But these same shippers are not pinning their faith on prospective American supplies, and the foreign article will no doubt continue to meet the demands here for some years to come.

### THE PETROLEUM MARKET.

Following closely on the heels of our last issue, in which we reviewed the conditions affecting the speculative prices of petroleum, came reports from the producing fields showing an extension of the Saxonburg oil district, several wells being reported with a large, though not remarkable, initial production. These were regarded as important bear factors which the operators seized upon to depress prices. Although at first meeting with but indifferent success the lack of confidence is shown in the small volume of business and the readiness with which the market has reacted from slight advances brought about by fair purchases. That the incoming of a few wells in territory which is notorious for the indifferent staying qualities of its wells should have the slightest influence on the market under the present conditions is surprising. It would require more than a score of new wells, each with a capacity of over one thousand barrels per day, to bring the daily production up to the present requirements for consumption, and we have not yet entered upon what may be called the season of largest demand. While the new wells show an output largely in excess of the average they have not caused an increase in the aggregate daily runs, which shows that it has required their united production to make good the decrease in the output of the older wells. Thus for this month the average daily runs do not come up to the average of those of July and it is not probable that there will be sufficient increase during the remainder of the month, should the wells now approaching the sand be equally productive, to bring the August production up to that of July. The field situation at the close of July showed a decrease of fifteen in wells drilling and of twenty-nine in new rigs, making a total decrease of forty-four in new ventures as compared with the situation at the close of June. It is therefore fair to assume that the number of wells completed during present month will show a proportionate decrease. To make up this decrease, and bring the total production up to that of July would consequently require a large

increase in the average production of the new wells. The daily reports of runs made by the pipe lines shows that there is thus far no important increase. There is, therefore, nothing that can be construed as a bearish feature in the incoming of these wells. But they doubtless answer the purpose of the speculative operator, whose main reliance is on rumors and reports which can be utilized to temporarily depress values. The remarkable feature of the situation is that under existing conditions bull operators have refrained from making a decisive aggressive movement. We do not by any means lose sight of the possibility of the discovery of a new field, but the difference between the production and consumption being fully 25,000 barrels per day, a new field adding that amount to the daily production is not among the contingencies to be seriously considered.

### NOT A VALUABLE DISCOVERY.

The Associated Press informed the public during the week that a certain professor in a California university had discovered a combination of oils and sulphur for tanning leather which would make it waterproof, pliable and indestructible. The story looked plausible until several Front street firms ventilated their views, when it was found that the alleged professor had been rather late in making his discovery, as such a process had been in use for some years in this city and elsewhere. The oil trade has become accustomed to such announcements, and while a few instances are related of firms having been "taken in," it would be rather difficult to impose on any representative of the trade as at present constituted. Each house has its own formulas for compounding oils, and as they seem to satisfy consumers, there is no desire to enlarge the list and run the risk of purchasing property belonging to some one else.

### FLINT GLASS MEN CANNOT AGREE.

It would appear from reports emanating from the West that the proposed amalgamation of the flint glass manufacturing interest in one immense stock company has been practically abandoned for the present because of what appears to be an insurmountable obstacle to success. We are informed that when the factories were appraised for the purpose of determining the amount of stock in the proposed company to be allotted to the individual owners, it was found that the great disparity in the value of the real estate and buildings of the Pittsburg and other factories compared with plants located less favorably and composed of cheap structures, would give the proprietors of the former a larger per centage of the stock than their actual capacity and the extent of their trade entitled them. As an instance of this the case of a factory at Beaver Falls, Pa., is cited. This plant consists of a furnace, surrounded by an old tumble-down shed, yet it has a large capacity, an extensive trade, and is reputed to have paid one hundred per cent. profit on its invested capital for several years. In the proposed amalgamation, the owners of this inexpensive plant would, it is asserted, receive less of the stock than some of the Pittsburg manufacturers whose factory cost more to erect and maintain but whose output is less than the Beaver Falls concern.

Our information is that no way has been discovered by which the obstacle thus presented can be surmounted and as anything short of an equitable division of the stock of the proposed company on the basis of actual value of production would be as unsatisfactory to the country firms as a proposition to waive the cost of plant in making a division would be to the Pittsburg producers, some other plan will have to be adopted or the scheme must be finally abandoned. The latter alternative is not likely to be accepted so long as there is a possibility of approaching the desired object by some other course, and although the scheme which is expected to be the salvation of an utterly demoralized industry may not be brought into practical shape for some time to come, there is no reason as yet to believe that its projectors will give up the undertaking until it is proved to be unfeasible from every point of view.

### THE MARKET FOR LOGWOOD.

The apparent prevailing impression among the manufacturers of dyewood extracts and others, has been that the present high prices for stick wood were entirely due to the troubles which have existed at the ports of production for some time past, and that immediately upon the receipt of news of the cessation of hostilities, the asking rates would speedily decline and assume a normal basis. From present appearances, however, it would seem that these conjectures will not be in accordance with the facts, as since the receipt of the intelligence of Hippolite's victory over Legitime, importers appear more firm in their views than at any time during the period of the revolution. They base their belief in higher prices on the fact that notwithstanding the flight of Legitime and the complete mastery of the situation by Hippolite, he will hold together the army of say ten or fifteen thousand men which he now has, to protect him until such time as he may be duly elected president and peace be assured, meanwhile these men are being kept idle, and unable to proceed with their regular work in the coffee plantations or logwood forests. Another reason given, is that owing to the fact that the foreign markets show signs of advancing and are in need of supplies, while there is already a fair stock here which does not move as rapidly as shippers would like, they are not liable to send much wood to this port with the foreign markets offering such favorable inducements. Again they assert that, owing to the fact that the coffee season is just commencing, this industry will be given the preference, as it generally is, and they point to this circumstance as another reason why they believe that higher prices will prevail. In accordance with the above, the importers declare they can see no prospects of any lower prices, but have faith that the market will assume a much stronger tone, and that the bottom has been reached. On the other hand, there is the limited demand and the assertions of some of the extract makers that they can see no reason why prices should not be further reduced, and express a decision not to buy at present figures, except when compelled to by force of circumstances.

### MORE FERTILIZER LEGISLATION.

The fertilizer trade is exercised over another measure, known as the Sanford fertilizer bill, which has passed the Senate of the Georgia legislature, while the Brady bill, which was recently referred to in these columns, has passed the House and is awaiting action in the Senate. The proposed Sanford act provides that on the demand of the purchaser of any commercial fertilizer, or composting chemical, a fair sample, securely sealed in a glass bottle, shall be deposited in the office of the clerk of the county in which the purchaser resides, or in which the fertilizer is delivered, and that such samples shall be analyzed by the chemist of the state agricultural department, and the analysis shall be received in the courts as evidence in case a purchaser should claim that the commodity has been found worthless.

While the latter is more acceptable to the trade than the first one introduced, neither of them is considered necessary when a well equipped agricultural experiment station, such as the state of Georgia possesses, provides all the information required to prevent imposition or adulteration. It was organized for that purpose and if the usefulness of the institution has ended it ought to be abolished. It will probably be found that the very readable bulletins giving the results of experiments, and issued monthly by the Station, are not read by the masses for whom they are intended, and that the farmers have sought legislative aid to correct evils that can be easily avoided by consulting the bulletins referred to. But when the lawmakers are ignorant concerning the information disseminated by their own state bureau, what can we expect of their constituents who look up to them as leaders of thought? The whole subject has been treated in a very crude manner as the discussion alone is sufficient evidence to disqualify the members of the legislature as representatives of that body.

### AN INTER-STATE COMMERCE DECISION.

Some of the Northwestern railroads have been cutting rates in defiance of the provisions of the Inter-State Commerce law, and now they are made to suffer by reason of their illegal course. The Burlington and Northern road cut the rate on the through business from sixty cents to fifteen cents, while the local rate was kept at sixty cents. As but little through traffic went by rail to St. Paul, the earnings of the road would not be seriously impaired, but the reduction of the local rate to the same figure would mean a reduction in gross freight earnings of seventy-five per cent., which would prove ruinous to the railroads. The adjustment of rates has been under consideration by the Western Freight Association, with the object of harmonizing conflicting interests and bringing about an abandonment of the cutting. They were not successful, and the question of the legality of the dual rate above cited was referred to Judge Cooley, Chairman of the Inter-State Commerce Commission. The decision was promptly rendered, and was unmistakable in its language. It is as follows:

1. The tariff the Chicago, Burlington and Northern has put in force is nothing but a local tariff. It is not a joint tariff, and nothing can be a joint tariff in which the lines do not unite; therefore, every time the charge on a local consignment is different from the rates named in said tariff it is a breach of the law, each consignment being a separate offense.

2. Even if the rates were otherwise legal, the great disparity between them and the so-called local rates would of itself render them illegal, and this applies whether the fourth section (the long and short haul clause) is ignored or not.

3. If this is persisted in, the remedy will be for the Commission to reduce the local rates to the basis which has been established. The roads must expect that remedy will be applied and that speedily. If the Commission announces rates, those rates hold good until changed by them.

4. The Commission prefers that the roads deal with this question themselves, but can not tolerate the present condition of things, and prompt action must be had. It is a public scandal and disgrace, and will, if it is continued, reflect upon the Commission. As the action taken is invalid, no ten-days' notice is necessary.

We are told in the press despatches that the members of the Western Freight Association were thunderstruck by the report, and that its reading caused the utmost confusion, compelling a prompt adjournment of their meeting without action. How any intelligent person, at all familiar with the provisions of the Inter-State Commerce law, could expect a different decision is surprising, as is also the fact that it was deemed necessary to submit the question to the Commission. The roads had plainly violated the law, and their course has now brought upon them complications whose results may prove disastrous if the Association cannot promptly come to an amicable agreement, which at present seems improbable. It has been predicted that if the recalcitrant road holds out, and makes all rates on the basis of fifteen cents the other roads will be compelled to follow, in which case some receiverships will soon be in order. Not one of the roads directly interested could continue such a rate for a year without becoming bankrupt. A little sound business sense is what is required in the management of these roads and the stockholders should see that it is secured before their interests are irreparably jeopardized.

### "MERCHANTS WEEK."

The scheme adopted in Boston to entertain customers and curtail the cost of drummers, as outlined in these columns recently, has caused considerable comment and houses in Boston who were known to be identified with "Merchants Week," are rushing forward to deny any connection with the organization other than to donate a small amount of money merely as a compliment to friends who were pushing the enterprise. That it is not generally popular is evidenced by the remarks that have been made since our last article on that subject. Our Boston correspondent says that the firms in the paint and oil line are not in sympathy with the movement and that the subscribers to the fund from that source will decrease before the year is closed.

To show the prevailing sentiment outside of Boston it is only necessary to quote a representative gentleman who was visiting this city from the West last week. He had occasion to discuss the "merchants week" feature of trade and said it was a contemptible way to treat guests; he did not know of a meaner method than to invite friends from a distance and expect them to pay for their entertainment by purchasing goods; he preferred the commercial traveler system and thought that much more benefit would be derived from the latter.

If "merchants week" is intended to ensnare the customer by securing orders through the obligation process of entertaining, as generally believed, then the feature will die from its own weight, as no reputable merchant would have his hospitality treated in that light. We may state on behalf of our Boston constituents who are contributors to the fund, that they have reaped no pecuniary reward from the association gatherings and do not expect any. They merely advance small amounts to assist in defraying expenses to oblige friends, but if it is true that the feature is being worked in the interest of one house in the grocery trade, as alleged, there will be a rapid secession of supporters from the ranks.

## TRADE ITEMS.

It is said that a special session of Congress will be called for October 20.

The Atlanta Ga., Chemical Company has been incorporated with a capital stock of $10,000.

The British brig Gertrude has been chartered to load 292 tons logwood at Black River, Jamaica, for New York.

It is authoritavely stated that Messrs. Gooderham & Worts have sold their distillery in Toronto to an English syndicate for $6,000,000.

It seems that there is a future in store for cocoanut oil as a lubricant, says the *Mechanical News*, and it has been found equally serviceable for lighting purposes.

In the fatal railroad accident which occurred at Knoxville, Tenn., last week. Mr. A. J. Alberts who is said to be a wholesale druggist of that section, had his left side badly crushed.

Several gentlemen representing cotton oil interests in the South were in the city last week, among whom may be mentioned Col. J. H. Duggan and son, Henry Marx and J. H. Kendall of New Orleans; Col. W. H. Wright of Little Rock, Maj. Jo. W. Allison, Memphis; Geo, E. Billingsley, Greenville, Miss.; Geo, O. Baker, Selma, Ala., and Mr. Kane of Galveston, Texas.

Mr. R. J. Thompson of the Thompson & Bedford Co., limited, who has been sojourning in Germany, France and Switzerland for the past three months, is expected to arrive home on the City of Paris to-day.

The N. C. Simmons, Jr., Medicine Co., of Grayson county, Texas, has been incorporated by N. Caud, J. J. Simmons,of Dallas, N. M. Lee and others with a capital stock of $10,000. The headquarters will be in Sherman, Texas.

Michael J. Leonard recently discovered 75 acres of land near Ripley, Tenn., upon which were rich deposits of yellow ocher. He told a friend about the discovery and the latter bought all the land at the ordinary price for real estate in that vicinity.

The President of the Chamber of Commerce of Lower California writes that Europe is fast getting control of the commerce of Mexico, and that America "is losing the opportunity by simple neglect and want of proper knowledge of Mexico's producing and consuming quality."

Peanut oil has been found in many samples of cod-liver oil sent to the Paris Exposition, and this fact has caused one of the officials to remark that "to present such articles to compete for prize awards dealers must have considerable boldness, strengthened by long impunity."

Mr. F. W. Thurston of Chicago, who is always ready to give quotations on glue, shellac, wood alcohol, &c., has been spending several weeks in the Adirondack Mountains, Lake George, the Thousand Isles and vicinity. He is now at home prepared for the usual heavy fall trade.

It is reported that the Badische Anilin und Soda Fabrik has sold its Stuttgart works to the firm of G. Siegle & Co., who will continue the manufacture of natural dyestuffs, while the Badische retains the manufacture of tar dyestuffs and has concentrated all its business at the Ludwigshafen works.

Copious veins of brine have been struck in the vicinity of Kane, Pa., in drilling for oil, and according to analysis there is a well 600 feet from the borough yielding water from which can be made a table salt of superior quality. The salt being already in solution, all that it needs is to be pumped out and dried.

Mr. Frederick Finck, the New York agent for Geo. Fowler & Sons, the lard manufacturers of Kansas City, is reported missing. He had taken passage on the steamship Norman at Boston for Philadelphia, and when the vessel arrived he could not be found. It is supposed that he fell overboard while on the way.

A new invisible lacquer has recently been introduced into London. It is so strong as to withstand weather, steam, smoke, sea air or sea water; and gold, silver, copper, steel, brass or iron does not tarnish when coated with it. As it is so fine as to be invisible on the most delicate instruments, the new lacquer is credited with an extensive field of application.

Farmers in eastern Pennsylvania have quite recently begun to use a new fertilizer which is well known to European agriculture, but has never gotten a foothold in this country. It is iron slag, produced in the manufacture of basic steel. An iron manufacturing concern in Pennsylvania is reported to be realizing considerable profit from the sale of the pulverized slag.

British consular reports from leading centers of Sicily report that the sulphur industry has reached a depth of depression never before known, notwithstanding a recent slight rise in prices. The lack of sufficient capital to properly mine and market the product is charged with contributing materially to the depression. The trade is said to be in the hands of a few speculators.

It is said experiments have determined that certain combinations of fat and oils, with sulphur compounds, when used for tanning, have the effect of rendering leather impervious to water and so pliable as to render it almost indestructible. The assertion is made that boots and shoes manufactured of leather thus prepared will last five times as long as the foot wear now on the market, with no additional cost.

Mr. Silvestro De Pasquale, of the firm of Santi De Pasquale & Figlis, manufacturers of essential oils in Messina, is at present on a visit to this country, and will remain until the 15th of September. Dealers and wholesale druggists wishing to contract for the next season, delivery from January to August 1890, will do well to consult the gentleman. He can be addressed in care of G. Amsinck & Co., 148 Pearl St., New York.

Appraisements recently made at the New York custom house seem to be dictated entirely by a desire to drive commerce from this port to other places on the coast, such as Boston, Philadelphia or Baltimore, where common-sense decisions on disputed points of classification of imports are still the rule, according to the opinion of an exchange, which is in line with the arguments previously advanced by the REPORTER.

Notice has been issued to the consignees of the steamer City of Para that the cargo in holds 1, 2 and 3 having been damaged by fire, smoke and water, the consignees of all damaged goods were required to make a deposit of ten per cent to cover salvage, general average and other charges. The only damage to the steamer was caused by the cutting of holes in the deck to allow of water being thrown directly on the fire.

Quite a number of important questions arising in the administration of the Customs laws are held up for the return of Assistant Secretary Tichenor, who has been seriously ill for several weeks. In fact, no new questions which come up in the Customs Division of the Secretary's office are considered in the absence of Col. Tichenor, so that cases are being piled up every day to await his return.

The immense packing house of Swift & Co., in Kansas City, was saved from total destruction by fire on Sunday by a fortunate shift of the wind. As it was, the smoke-house, a structure of corrugated iron, forty by forty feet, and the rendering house, 128 by 40 feet, were consumed. The total loss on buildings and machinery and stock is placed by Superintendent Young at $150,000, with $120,000 insurance, placed with forty-two companies.

The Collector of New York has been informed upon the authority of an opinion rendered by the Solicitor of the Treasury, that he may substitue new merchant appraisers in the places of those who are sick or absent,and that the power of appointment vested in the Collector in such cases is not exhausted by the apointment of an appraiser who may be ineligible, or of another who may have refused to serve.

In a letter to the African Trade Section of the Liverpool Chamber of Commerce the Governor of Lagos, British West Africa, referring to various specimens of the products of the Yoruba district which he had brought from Lagos, and left with the Chamber at Liverpool, says Lagos offers a fair field for the establishment of an oil-crushing business conducted on a small scale at first. Cocoa-nuts can be there purchased, as they fall from the tree, at 2s@2s 6d per 100.

In the Supreme Court last week, Judge Barrett ordered that the summons be served in a suit by the National City Bank of New York against Glidden & Curtis, of Boston, and the Pacific Guano Co. Mr. Glidden, the senior member of the firm, is president of the guano company, and the bank alleges that drafts amounting to $15,450 were issued by the Pacific Guano Company on Glidden & Curtis and that it has been unable to get the money due.

Arrangements are making at Washington for the meeting of the American International Congress which is to meet in Washington on October 2. The President in his invitation, set forth the principal objects of the congress, which are the preservation of peace, a better mutual understanding between each nation, the establishment of a better and more frequent communications by water, a uniform system of customs regulations, weights and measures; laws to protect patent rights and for the extradition of criminals, the adoption of a silver coin and some plan of arbitration.

The Union Soapstone Company, of Boston, has made an assignment for the benefit of its creditors to Charles H. Tyler, expert accountant, of No. 113 Devonshire street. Mr. Tyler says he sees no reason why the company cannot pay dollar for dollar. Certain parties have been putting money into the company, but they decline to do so further, and the assignment was thus forced. The liabilities, exclusive of the $100,000 capital stock, are about $37,000; nomiual assets, $103,000. John M. Little is president of the company, which manufactures artificial soapstone. employing thirty hands, at its works in Everett.

There has been patented in Germany a process by means of which sulphuric acid for manufacturing purposes can be safely transported. The inventor takes advantage of a property of certain salts—of which alkaline sulphates are representatives—by which they give up thesr water of crystallization when heated and take it up again when cool; and he does so by mixing the salts in an anhydrous condition with a calculated quantity of sulphuric acid. The whole mass becomes granular, or may be formed into cakes, and when heated the whole liquefies, and may be used as if it were sulphuric acid, for the presence of bisulphate of soda does no harm.

Internal revenue Commissioner Mason, in explanation of the reason for issuing the order prohibiting the refilling at distilleries of casks and barrels, said that it was taken because the law does not regard fractional parts of a gallon, and taxes more than half a gallon as a full gallon, allowing less than half a gallon to go untaxed, The distillers, the commissioner say, have taken advantage of this fact to use two barrels, the one used at the distillery, upon which taxes are paid, containing a fraction less than a half-gallon, and the other, which is used when the whiskey leaves the refinery for the trade, containing less than even gallons, but more than a half gallon. The effect of this scheme is to defraud both the Government and the customer. One distiller, Mr. Mason said, recently had a surplus of 240,000 gallons as a result of this manipulation.

The assignees of W. T. Coleman have made a transfer of the mining interests of the estate, situated in Shasta aad Trinity counties, California, to W. A. St. Aubyn, an English mining engineer, reprcsenting a syndicate of German capitalists, who propose to operate the mine on a large scale. The properties have hitherto been worked under the name of the Niagara Mining Company, and include the well-known Niagara mine in this county and a large area of undeveloped ground in the French Gulch District,, purchased by W. T. Coleman and esteemed of great value. Negotiations for the disposition of these properties to the purchasing parties had been in progress for some time prior to the failure of W. T. Coleman & Co. The embarrasement of the firm rendered it impossible, for the time being, to give a satisfactory title. This difficulty has been overcome, and the transaction was satisfactorily concluded a day or two ago.

## PETROLEUM NOTES.

The Kentucky Southern Oil and Gas Company propose erecting a refinery at Louisville, Ky.. within the next ninety days for running illuminating oils.

Last year Pennsylvania produced over 16,000,000 barrels of petroleum and Ohio 10,000,000. Five years ago the production of the latter State wasn't worth noticing.

The drillers at the gas well at Spencer, Ind., recently struck a vein of salt water at a depth of 711 feet. A pint of the water was evaporated and three-quarters of an ounce of pure salt was obtained.

The Columbia Oil Refining Company of New York, capital $175,000, has been incorporated at Albany. Thomas McGoly, of Brooklyn, and Hugh King and Peter McDonnell of New York, are the incorporators.

It is reported that the Globe Refining Company will build a pipe line to connect its refining plant on the South Delaware River front, which is rapidly nearing completion, with the oil fields in Western Pennsylvania.

The Kentucky Southern Oil & Gas Co., of Louisville, have offered to erect an oil refinery at Glasgow, Ky., with a capacity of 1,000 barrels per week if the citizens subscribe for $18,000 of their bonds, donate a site 600x400 feet, and give certain privileges.

As a Lake Shore freight train last Thursday pulled into the Erie, Pa., yard the engine left the track. The first oil tank exploded, and in addition to destroying the engine and about $50,000 worth of property, Engineer J. Loftus, of Buffalo, was badly burned about the face and hands.

The bark Onaway, from Philadelphia June 5 for Bilboa, with 124,234 gallons crude petroleum, valued at $8,956, is believed to have been lost, as nothing has been heard of her since she sailed. She had, a crew of 15 men. The captain's wife and two children accompanied him.

The Dalton, Ga., Gas Company in excavating for their gasholder at the depth of ten feet had their men run out by the odor of gas, and upon investigation it was found that there was a weak flow of natural gas from a crevice in the rock. They will go deeper and see what is to be found.

The Findlay, O., Gas Trustees located two more new wells last week. Both are in Allen Township and in tested territory. It is estimated that Findlay can now draw on 200,000,000 feet of gas daily, and the work of drilling still goes on in order that the city may be in a condition to meet any demand or emergency that may arise.

In 1886, attention was directed to the resources of New Zealand in respect to petroleum, and some very fine oils were found. There are three principal localities, and these produce each a distinct kind of oil,the Sugar Loaves in the Taranaki province; Poverty Bay, on the east coast of the province of Auckland; and Mauntahi, Waiapu, East Cape.

A Pittsburg firm has secured a contract for the construction of 75 steel oil tanks. The carrying capacity of each tank will be 165 barrels. They will be strapped to gondola cars. The contract price is $87,000, and the work will be finished by January 1. It has not been definitely announced who the cars are for, but it has leaked out that the tanks are for a large oil refinery at San Diego, Cal.

A fire broke out in the store house of the Vacuum Oil Company in Rochester Monday morning. It is supposed that a spark from a locomotive on the Erie road ignited some oil waste and thus started the fire. Besides the building about 156 barrels of kerosene and a few barrels of lard oil were destroyed. The water had apparently no effect on the burning oil, but the firemen finally got it under control.

At a joint meeting of the board of public works and the State canal commission last week at Columbus, the Miami and Erie Transportation Company was granted the right of way to lay a pipe line along the berme bank of the Miami and Erie canal from the Mercer oil and gas fields to Lockland, a distance of about one hundred and thirty miles. The franchise is for ten years, and the company is to pay an annual rental of $3,000.

Last Saturday morning an explosion occurred in one of the stills of the Astral Refining Company, at Astral. The still, which was of 500 barrels capacity, had been steamed preparatory to being cleaned and contained very little oil. What caused the explosion is not known, but it is supposed to have been due to the cold air coming in contact with the vapor when the still was opened. The still house was destroyed and four men were seriously burned.

Gas well No. 5, at Upper Sandusky, O., heretofore considered the third best producer of the corporation wells, has broken loose, and is now believed to be monarch of the field. This well drilled in last March, and proved to be good for 3,000,000 feet. For the past several weeks the well has been acting queerly, and there was much evidence that it was getting stronger. Nothing in the way of making the well more secure was done, and the result is that it has taken a sudden turn and blown out the packer and tubing.

It has been known for some years past that there exists on the banks of the River Boorong, South Australia, an oxidised petroleum in the form of an elastic bitumen. A company has been formed to bore for the liquid petroleum, and great confidence is expressed by experts that the south-eastern parts of South Australia will ultimately become the largest petroleum field in the world. Skilled drillers from Canada and Galicia have been engaged, and already engineers and drillers are on the way out to South Australia.

The fight between the Pennsylvania and the Baltimore and Ohio Railroads, resulting from the attempt of the latter to lay a siding into the new establishment of the Globe Refining Company, on the South Delaware front, has been settled in favor of the Baltimore and Ohio's interests. The two roads have agreed that each shall have tracks into the works. The traffic falling to the roads will consist principally of the carrying of crude oil from Western Pennsylvania. There will be little to carry from the refinery, since the product will be exported.

The cool summer has been advantageous to the tank steamships which carry petroleum in bulk, Many of the captains estimate that they have carried 40,000 gallons more on each trip this summer than they did the same time last year, owing to the temperature alone. In winter the tanks cannot be filled to their maximum capacity, owing to the warm temperature of the Gulf Stream, which would cause them to overflow if filled. The German steamship Elsie Marie, which sailed from Point Breeze last week for Hamburg, carried 1,500,000 gallons in bulk. She is a new vessel built by Mitchell, Armstrong & Co., in England.

A few months since Prof. Orton, State Geologist of Ohio, visited Marseilles Township and made some careful observations of the surface indications in that vicinity and pronounced the prospects for gas the best he ever saw. He based his claim on the frequent cropping out of the Niagara limestone that is noticeable in that neighborhood. On the strength of his examination and assertion, some Columbus parties leased 2,000 acres of territory in that vicinity, and lately began drilling. They have just completed their first well. Trenton was found at a good depth—1,300—but 55 feet in the rock failed to develop any gas, and the well was abandoned.

The increased charges now being made for locomotive fuel in England, promise to give an impetus to the use of oil and tar for heating purposes. There are many methods in practice for using oil, but the application of the principle is still in its infancy. The directors of the Great Eastern railway have had their attention drawn to the matter, and have experimented with a system devised by their locomotive superintendent for generating steam by means of tar and oil. The system does not involve any structural alterations, and it has been adopted as a test on three engines—a shunting engine, an engine on the suburban lines and an engine on the express trains—and so far it has been a success.

Another big natural gas line from the new Belle Vernon fields in Fayette County has been decided upon. Jones & Laughlin are the projectors. The line will be about eighteen miles long. It is said that it is only a question of a few months until all the large manufacturing interests will be independent of the old lines, such as the Chartiers and Philadelphia. Jones & Loughlin's line will cost about $250,000. The firm have acquired a large leasage in the new fields and will develop their holdings as their demand for gas requires. Andrew Carnegie set the example a week or so ago by the announcement that a line to connect his Edgar Thomson steel works at Braddock with the Belle Vernon field would be built. His line will also cost $250,000.

The *Scottish Leader* is responsible for the following: "The manufacture of permanent gas from oil for all purposes of illumination has for some years past been occupying considerable public attention, and in some instances the oil gas has superseded the manufacture of ordinary coal gas. The apparatus seems to have been most successful in the way of simplifying the new process. The plant has been erected in numerous mansion houses and public works throughout the country, and in some instances small towns have had their coal gas works transformed into manufactories of the new illuminating power." It is claimed for the new oil gas that 1¼ feet of it give the same amount of light as 3¾ feet of Scotch coal gas, and as 6 feet of English gas.

Early last Wednesday morning the oil refinery of A. D. Miller & Co., Alleghany City, was totally destroyed by fire. The cause of the fire is unknown, but the owner thinks it originated by a still blowing up and igniting a tank which contained about 5,000 barrels of crude oil. From there the flames soon crept to the cooper shop, in which was stored 1,000 barrels and about $15,000 worth of staves. The engineer of the establishment was caught in the flames and his remains when recovered were burned to a crisp. The night stillman was injured so that he can hardly recover. The total loss is estimated at about $200,000, on which the insurance amounts to something like $80,000. The Miller refinery was erected in 1860, and had a capacity of 4,000 barrels of crude oil per week. The owners say that a much larger establishment will be built immediately.

The Wheeling *Intelligencer* contains the following from its correspondent at the Smith & Aiken well: "The well has never given any indication of enormous production. It did put oil in the tank, and though plugged is still spraying, but at present its chief product is gas and a heavy pressure. The drillers say the well is finished, but experts who visited it recently say this is not true and predict that as soon as the gas blows out enough to permit men to stand over the hole, work will begin again. Nothing is being done now, and it is believed that nothing can be done for several days. This hole is 2,019 feet deep and not through the sand. In spite of the superabundance of gas, oil men say the well will be a good one, and those who have leases in the vicinity are much encouraged. Smith & Aiken have refused an offer of $17,000 for the well and an acre of ground around it."

The *Tribune* oil reporter soliloquizes thus; "One year—two years ago—the petroleum trade was well versed in the geography of the Pennsylvania oil producing fields. Maps of the various districts were in every office that pretended to do a brokerage business, and the news of this and that "gusher" was eagerly searched for as a hint to the next purchase or sale of certificates. The opening of a small well often caused a commotion in the speculation. At the present moment the advices from the oil country are barely noted in the trade journals. A "gusher" of 50 or 100 barrels an hour excites less alarm than would have been created a year or two ago by the opening of a well of ten barrels an hour. Yet speculation to-day is as dead on the opening of a new pool as it was active and live a year ago when the production in the Pennsylvania field was watched as with a telescope. No stronger proof could be afforded of the radical change which has occurred in the position of crude petroleum."

A correspondent of the *London Grocers' Gazette* writes: "Some weeks ago I intimated that the Mineral Oil Association would restrict, as in former years, for the purpose of raising prices for the coming year's contracts, but it appears they have changed their restrictive policy. In 1887 and the beginning of 1889 a total and simultaneous stoppage of work took place. But to all appearance the policy for the coming restriction is to stop certain works at certain periods of time, so that their action will not be so glaring. The Dean appears to be the first on the list, where the reports have been shut down for ten days, but, as they have no shale in stock, the miners will have the privilege of seeing their labor for eight of these days go to form a bing, which will be equal to eight days' idle time to the Dean miners at some future period. In conjunction with the above, the coming year's contracts for burning oil have been raised three farthings per gallon over last year's prices, which will give the combined oil companies a profit of over 9¼d. on every ton of shale distilled over and above last year's prices.

## CHICAGO LETTER.

[Special correspondence of the OIL, PAINT, AND DRUG REPORTER.]

CHICAGO, August 24, 1889.

The chief feature of interest in this week's market in linseed oil has been a decline of two cents, which was determined upon by crushers on Wednesday. Raw oil can now be bought at 58c and boiled at 61c. The cause of this action is not due to any pronounced falling off in demand, which is fully equal to, if not better, than that customary at this season. It is attributed to the fact that more mills are resuming operations and the probable prospects of a large crop of seed. Speculation as to the future course of the market is being indulged in to a very considerable extent. There is no little surprise expressed at the continued backwardness of the crop movement, and conjecture is rife as to the causes. Tardy arrivals might tend to keep up the price of linseed, and jobbers might not be able, at the beginning of next season, to obtain the 45c oil which they are talking about. This would be a matter of some importance, considered in connection with some contracts already made. Apart from this, the trade generally seems tolerably well satisfied with the prospect of steadiness which is insured by the fact that the great bulk of the output will be practically under one control. At the same time, it is not expected that there will be much money in jobbing oil, as it is thought that the tendency of trade will be directly from producers to consumers.

Oil cake remains very firm, but there is not much doing. There is nothing in sight except the new product and not much of that. Crushers are accordingly very firm in their views, asking $22 50; there is a good demand at $22 00, but as buyers are indisposed to give more there is but little trading. Not so much inquiry for future is reported as last week. This week's exportations have been 907,414 lbs. The total exportations since Jan. 1st have been 30,187,675 lbs, as against 37,907,516 lbs. during the same period last year. As compared with the last week, these figures show an increase of 777,684 lbs., and a decline of 7,799,841 lbs. since the first of the year.

FLAXSEED.

For the first time in several months the inspection sheet at the beginning of the week showed an accumulation of seed in public elevators, the amount being 60,301 bushels, distributed—as to grade—as follows: 40,093 bushels of No. 1, 6,366 of rejected, and 4,842 of no grade. On the corresponding date of last year there were in store here 33,352 bushels, all of No. 1. Official figures show 184 cars inspected in—153 of No. 1, 25 of rejected, and 6 of no grade, as against 163, 17 and 21, respectively, last week; and 148 cars of No. 1, 40 of rejected and 52 of no grade during the same week of 1888. There have been inspected out 93,635 bushels (187 cars) of No. 1, and none of the lower grades; last week they amounted to 71,974 bushels, all but 1,500 of which were of No. 1.

The following table, showing the daily movement of seed at Chicago, is prepared from figures furnished by the Secretary of the Board of Trade.

| | RECEIPTS. | | SHIPMENTS. | |
|---|---|---|---|---|
| | 1889. | 1888. | 1889. | 1888. |
| Monday..... | 7,343 | 12,998 | 9,952 | 15,089 |
| Tuesday..... | 16,234 | 6,392 | 5,327 | 24,197 |
| Wednesday .... | 17,903 | 40,529 | 15,777 | 4,104 |
| Thursday ..... | 9,315 | 14,293 | 4,800 | 4,084 |
| Friday... ..... | 9,456 | 19,972 | 13,609 | 7,173 |
| Saturday. ..... | 8,249 | 12,454 | 28,916 | 4,153 |
| Total..... | 68,500 | 106,638 | 78,381 | 58,800 |
| Last week.... | 75,113 | 62,902 | 90,202 | 48,468 |

In the market for cash seed the week opened on Monday at Saturday's closing price—$1 21 for No. 1, with bag lots of extra choice seed, delivered, 1c higher. Local crushers bought freely, and under the influence of an excellent demand the market was very firm. Rejected seed was nominal at $1 18, and no grade sold at $1 16. On Tuesday there was inquiry sufficient to absorb all offerings and No. 1 advanced to $1 23, which was 2c higher. Lower grades were very quiet but steady at $1 18 @1 20 for rejected and $1 16@1 18 for no grade. On Wednesday offerings were very light, most of the seed arriving being tendered on contract. Sellers demanded higher prices, which buyers were compelled, reluctantly, to pay, and sales were made at ½@1c advance Rejected and no grade were at about Tuesday's quotations, but without trading. On Thursday there was little trading, but No. 1 was firm at $1 23½, owing to light offerings; while bag lot were at 1c discount. The bulk of the seed arriving went on previous sales. On Friday it was difficult to fill buying orders, the demand being in excess of the offerings. The result was that No. 1 advanced 1c, selling at $1 24½, with bag lots delivered ½c lower. To-day all offerings were quickly taken and No. 1 appreciated 2c, closing at $1 26. Lower grades were in little request, rejected bringing $1 23½@1 24½, and no grade nominal at $1 20@1 22.

The characteristics of the week's market have been fair receipts, free deliveries on previous sales, light offerings, a brisk demand, with a resulting firm feeling and upward tendency. The week's range of prices has been $1 21@1 26, while for the corresponding week last year it was $1 19@1 31, five cents of the latter variation having occurred on the last day of the week.

Sales of cash seed as reported on the floor of 'Change, foot up as follows: Sales of No. 1, 87 cars and 327 bags (88 delivered), as against 92 cars last week; of rejected, 5 cars, as against 10 cars last week; of no grade, 2 cars, as against 18 last week; total, 94 cars, or 26 less than a week ago.

Early in the week local crushers made some purchases, but later most of the buying was done by shippers. Besides the rail shipments, vessel room for 40,000 bushels was engaged, with Erie and Buffalo as points of destination.

In the speculative market there has been less trading than last week, owing to the meagerness of the offerings. At the early opening, there was a light, indifferent demand, and a rather weak feeling. An active inquiry, however, soon manifested itself; a feeling of pronounced firmness was developed and the later course of the market was upward. August delivery opened on Monday at $1 21, or ½c higher than Saturday's closing, and fully half the week's sales were at that figure. On Tuesday it was nominally the same, but unsold. Sympathizing with cash seed, it advanced 2c on Wednesday, selling at $1 23. On Thursday it was saleable at $1 23½, but there were no transactions. It touched $1 24 on Friday, and that was bid at the close without sellers. To-day a small lot was sold in settlement at $1 26½c or ½c higher than cash. September opened on Monday 1c lower, selling at $1 19, but quickly recovered to $1 20, or ½c higher than Saturday's closing. On Tuesday it sold early at $1 22, but later at $1 22½ and closed at $1 23, at which figure it was fairly active on Wednesday. On Thursday it sold sparingly at $1 23@1 23½c, and on Friday occurred the heaviest sales of the week at $1 24. To-day it ranged from $1 25@ 1 27, only one car selling at the outside, with the bulk of the trading $1 26½c. One car of October delivery sold on Monday at $1 21, which was 1c higher than September on the same day. This delivery was not mentioned again during the week. Year opened quietly on Monday at $1 19, and closed with $1 20 bid; sold at $1 20½@1 21 on Tuesday, with $1 22 bid about the closing; sold moderately on wednesday at $1 22½c; and during the remainder of the week were not dealt in although saleable at $1 23 on Thursday, $1 24 on Friday and $1 26 to-day. May delivery was inactive on Monday, with $1 26 bid, sold at $1 26½@1 27½ on Tuesday, closing with sellers at the outside; remained unchanged on Wednesday and Thursday, advanced to $1 29 on Friday, and to-day sold at $1 30, closing with $1 31½ bid.

The aggregate transactions in the speculative market during the past six days as compared with those of last week, have been as follows: Sales of August 22 cars, as against 21 cars and 8,000 bushels last week; of September, 29 cars and 73,000 bushels, as against 31 cars and 131,000 bushels a week ago; of October 1 car; of year, 6 cars and 20,000 bushels, as against 9 cars and 25,000 bushels: and of May 34,000 bushels, as against 28,000 bushels last week.

OILS.

As was foreshadowed a week ago the decline in lard has not been without its influence upon the market for cotton oil. This week's drop in the former has been even more pronounced than that of a week ago, cash lard having closed to-day at $5 90. The consequence of this downward tendency has been to check the inquiry for oil very materially, and the market is settling down to the dulness of a few weeks ago. Quotations are unchanged, but there is perceptible an easier feeling. Summer yellow (season's prime) is still 55c, with the price of off grades fluctuating according to the buyer and the purpose for which he wants the oil. There is a little business in white oils, both summer and winter, but quietude is the rule. The former sells occasionally at 45c for car lots, and 47c for smaller quantities, the latter remains firm at 52c, but slow of sale. As the season advances it becomes more and more evident that very little, if any, oil will be left when new crop oil begins to arrive. There seems to be no soap stock in sight—at all events we can hear of no sales.

In the lard oil market there is a fair movement of extra, but hardly up to the volume of last week's business. Pressers are still asking 49c, but it is certain that sales of at least two well known brands have been made at 48½c. Careful observers do not consider the outlook favorable to higher prices in the near future, particularly in view of the weakness in lard, which has steadily declined all the week, opening at 6 17½c and dropping gradually to 5 90c, closing to-day at that. The presumable cause of this weakening has been heretofore explained. There is a very moderate inquiry for extra oil from the East, and direct exportation is practically at a stand still. Few sales of No. 1 is reported, and No. 2 seems to have dropped out of sight. The former is nominally about 37c. while there are offerings of the same sort of oil to which I referred last week at 35c. Good No. 1 is scarce, supposedly because of the high price of which grease, in turn, seems to owe its present firmness to a brisk demand emanating from the soap makers. This of itself would naturally tend to induce higher prices, were it not for the firm hold which substitutes therefor seem to have taken upon the affections of buyers.

The suggestion thrown out a week ago of a possible decline in the Dutch market for oleo, in consequence of a slight accumulation of stocks at Rotterdam, has met with a more striking realization than had been expected. The past week has witnessed a sharp and sudden decline from 62fl to 56fl, which was a more sudden drop than any one was prepared for. In reply to inquiries from this city, a cablegram was received, saying: "There was no cause for any decline, as stocks are small and the demand for butterine good." Naturally, churners were completely unnerved by so sudden a precipitation downward, and in the expectation of another drop they have held back and displayed not the least animation. Consequently, this week's sales have fallen off 1,900 tierces as compared with those of a week ago, the respective figures being 3,400 and 5,300. That there is still a tendency abroad to an accumulation is shown by the fact that this week's Holland receipts has been 5,732 tcs, and the exports to Rotterdam 5,250 tcs, as against 4,744 a week ago. That the feeling abroad is not hopeful is evidenced by the following cablegram which was received here to-day: "Market dull; difficult to find buyers; the decline has demoralized the English butterine market entirely." There is nothing doing in the local market, the few trivial sales being unworthy of mention.

PAINTS.

There has been a slight improvement in activity in the paint trade this week, some of the leading jobbing houses reporting preliminary symptoms of the opening of the fall trade. Some of the traveling men are beginning to speak hopefully of the signs of the times as indicating a favorable outlook, while others are more disposed to lament their inability to sell goods at present than to prognosticate the future. Corroders report a fair trade in white lead for the season, and jobbers are selling as little of it as possible, considering it an altogether unattractive commodity to handle. Quicksilver vermilion occupies a peculiar position. There is reported a good inquiry for use on agricultural implement contracts, but in certain quarters of the trade at large there seems to be an underlying feeling of uncertainty as to the future action of the manufacturers, and a few jobbers even go so far as to question whether present prices on quicksilver will be maintained, although the latter surmise finds few supporters. The uncertain feeling is due to a suspicion of dissensions among the manufacturers themselves, and a belief that no further advance is probable until some one manufacturer, whose stock of quicksilver may be in excess of that of his competitors shall have seen the bottom of the supply on hand. That present prices are too low is universally conceded. Paris green remains very quiet, and the general list presents no features of special interest.

The committee having in charge the project of holding the 1892 World's Fair at Chicago have appointed the following representative dealers to solicit subscriptions for stock in the corporation among the paint and varnish trade: Messrs. John Alston, of the Alston Manufacturing Co.; J. W. Masury, of J. W. Masury & Co.; C. H. Cutler, of C. T. Raynolds & Co.; Ernest Heath, of the Heath and Milligan Mfg. Co.; C. F. Gates, of the Chicago White Lead and Oil Co.; and Charles Goldsmith, of Charles Goldsmith & Co. A meeting of this committee was called for Thursday last, but owing to the enforced absence of some of the members from the city it was postponed until next week.

DRUGS.

Business continues good, and the steady tone of the market to which reference was made a week ago is still perceptible. Opium remains firm at last week's figures, but shows no special activity. Jobbers report a steady, normal demand at $3 30. Despite the reports of an excited market in New York, quinine remains unchanged here, jobbing at 26@27c. Probably the outside figures might be called the market, and the inside—for want of a better name—the fighting price; it being a fact that for some time past certain of the local jobbers have not been altogether "dwelling together in harmony," so far as quinine is concerned. Conservative observers here do not place much faith in the predictions of 35c quinine, giving as a reason their belief that the moment the 30c limit is passed the market will pass under the control of second hands. Manufacturers' agents here are to-day asking 27c, and it is said that with a grim sort of humor, they are referring customers who ask concessions to some of the jobbers. Local jobbers, as a rule, are not carrying very heavy stocks, and as distribution is beginning to be a little more active, an advance by them seems probable. Oil of cassia has advanced a trifle, and is to-day jobbing at 35c, per contra, oil of sassafaas has declined, selling in a jobbing way at 50c. Iodine remains at last week's prices, $2 20@2 26. Iodoform and iodide of potash have suffered yet another decline—the former to $2 75 and the latter to $1 75. It is universally believed here that these prices represent actual values, and correspond with the relation of supply and demand far more closely than do the prices formerly ruling. Tamarinds are jobbing at 10c per lb., the decline being attributed to larger supplies. Gentian is being offered very freely, and, as compared with last year's prices is very low. Citric acid is weak and inactive, as also is quicksilver. Balsam copaiba on the other hand, continues firm at former high prices, and is in normal request. Cascara sagrada remains low, one sale of excellent quality of bark being reported at 8c with futures offered at 10c

CHEMICALS AND DYESTUFFS.

In the chemical market trade has been fairly active during the past week and brokers are becoming better satisfied. At the same time, there have been no particularly noteworthy changes in quotations. Sales of 70 per cent. English caustic soda are reported on a basis of $2 37½@2 40c. Stocks in consumers hands are not large, and the demand should be better. But some of the largest buyers are purchasing domestic caustic direct from the manufacturers, and at prices which are not made public, but which are said to be lower than the figures which the latter quote to brokers. Carbonated soda ash is very quiet, and prices are unchanged—$1 45@1 47½ for Liverpool 48 per cent. The apparent present probability of a lock-out in the window glass factories has not tended to improve the situation. Caustic soda has received no attention; the market may be called nominally $1 55@1 60 for single casks. For refined alkali there is some inquiry, and prices are firm 58 per cent. being held on a basis of $1 25 for 48 per cent., although for some large lots these figures might possibly be slightly shaded. The suspicions which were cherished last week in reference to the firmness of sal soda have

found their confirmation. Schedule prices of 90c@$1 are apparently being well maintained in the country, but city buyers are more favored. It may be set down as positive that sales have been negotiated at from 85c down to 80c, and it is whispered that bids at yet lower figures have been solicited. The responsibility for this state of affairs is hard to fix, inasmuch as either party charges it on the other, and from present appearances it would seem probable that it is only a question of time when this market will once more see a 78c rate. Bleaching powder is in only moderate request, but holders display more firmness. Prices have advanced to about $2 12½@2 15. Paper makers, however, are not taking much and the market is quiet. Blue vitriol is, if anything, yet weaker and there are more sellers than buyers. Bids are being requested, and it is thought that for a car lot 5c would be regarded as a rather tempting offer. There are various surmises heard as to the cause of this weakness, but it is generally attributed to the decline in copper. The low price of cream tartar continues to prove attractive to buyers, and brokers report that this month's sales will exceed those of any month for three years. Alum continues in excellent demand.

There are few new features in the market for dyes and dyestuffs. Business has progressed quietly, but has been of about the usual volume. Anilines continue in steady jobbing demand at uniform prices. Logwood, both stick and extract, is weak, the wood having declined here about five cents on a hundred pounds. Considered on the whole the season's trade in dyes and dyestuffs has not been up to that of last year. The decline in the output of the woolen mills has been from 10 to 15 per cent, and these figures represent pretty nearly the ratio of decrease in the volume of business transacted in this line.

BRIEF NOTES.

The executors under the will of the late Nathan Corwith renounced their office on last Tuesday, and letters testamentary, with the will annexed, were issued by the judge of probate to Arthur B. Wells, a creditor, in bonds of $4,000. The estate is sworn not to exceed $2,000 in personal property. The widow's award will probably take it all.

It is tolerably apparent that the Distillers' and Cattle Feeders' Trust has secured control of the half finished distillery at La Salle, Ill., known as the Kidd distillery, the erection of which was commenced some time ago by the Standard Spirit Refining Company. Mr. H. McLean, who holds the position of financial agent of the former corporation and carries credentials of the latter as his authority to audit bills, is at La Salle, settling the open accounts of the different contractors. The cost of the unfinished structure, as it stands to-day, is estimated at $200,000.

The Chicago Drug Specialty Company has been organized to compound and deal in patent medicines; capital stock. $10,000; incorporators, Oliver D. Bonney, Wm. H. Mayard, Theodore S. Kenyon and others.

THE CLEVELAND CONFERENCE OF GLASS MEN.

The news of the adjournment of the Cleveland special meeting of the Western Window Glass Manufacturers Association on Wednesday without coming to any terms with the men as to a new wage scale has been received here, but has excited comparatively little comment, having been pretty generally discounted in advance. The sentiment among jobbers favors the manufacturers, it being conceded in the existing state of the market it would be ruinous for the latter to make the concessions demanded. Stocks in second hands all through the West are ample, and it is believed that there is a considerable accumulation of desirable sizes in the hands of manufacturers. Under these circumstances it is not easy to see on what theory prices are to be advanced, especially if fires in the factories be lighted on the 15th prox, and it is openly asserted here that a lockout just now be would be the best thing that could happen for every one connected with the trade, with the possible exception of the workers. The news of the reported disagreement between the proprietors of the "big tank" and the master spirits of the glass-blowers is being discussed with a good deal of interest, inasmuch as the action of the former in the premises is regarded as the key to the situation. As a jobber said yesterday, "if the tank boils the pots will have to." Considerable speculation is heard as to the probability of a compromise in this quarter, and the probable result of the adoption of such a policy, That it would prove disastrous to the proprietors of pot furnaces every one believes, and there are those who prophesy that it would precipitate a bitter conflict, in the course of which some of the smaller concerns, who depend for fuel upon recently discovered gas wells in the Indiana belt, would be wiped out. As matters stand, the situation is anything but satisfactory. Holders of large stocks of glass are unable definitely to determine the value of their property, and the prevailing uncertainty as to the future renders the outlook anything but encouraging.

It is understood that there was some talk at Cleveland of the formation of a combination to erect several big tank furnaces, the cost to be equally divided, but the project took no tangible shape. CALUMET.

## MISCELLANEOUS.

### Theodore Weicker Honored.

The REPORTER is pleased to announce that Mr. Theodore Weicker has been admitted as a partner in the well known chemical firm of E. Merck. Mr. Weicker having displayed great ability in the discharge of his duties, as manager of the important New York house it was concluded to reward his valuable services in this manner. When on a recent visit of several weeks abroad, he was very much surprised to learn of the contemplated change, and since his return to New York a large portion of his time has been occupied in receiving the congratulations of a host of warm friends. The action of the firm is quite a compliment to the energy and business qualifications of the fortunate gentleman. He has certainly made rapid progress in advancing the interests of the establishment in the United States, and the compliment is well bestowed. The sensible course of the house will redound greatly to its credit.

### The Market for Logwood Extracts.

Judging from comments in some of our American contemporaries, says the London *Dyer*, it seems that the combination between several of the logwood extract makers in America, entered into 18 months ago for maining prices, has broken down; in fact, it was merely a nominal matter throughout the entire period of its existence. The competition is now very keen, and the amount of cutting that is going on is very great. Whether either the consumer or the manufacturer benefits thereby is an open question. Certainly the former will need to be alive as to the quality of the goods sold to him, and the latter will be at his wits' end to make a profit when his raw material costs him 44 per cent. more than it should do.

### White Lead Delivery Points.

According to the Boston press the white lead jobbers of that city are speculating somewhat as to the probable action of the National Lead Trust in regard to the matter of delivery points.

"Under the old arrangement," says one paper, "the conditions in this respect were far from satisfactory, and changed conditions for the better are looked for. For instance, if Portland, Manchester and Worcester were to be accorded Boston rates, then would Boston jobbers be excluded from the neighborhood of these points for the reason that in their territory jobbers in these points would have the advantage on their respective markets to the extent of the freight rate from Boston to these points. It is suggested, as being fair to all parties concerned, that corroding points should be the only delivery points, and that on orders to other points the local tariff rates should be charged extra. This would not give the heavy Boston jobbers of lead any advantage, though Boston would become a delivery point. To illustrate: assuming the price of lead to be $5 per 100 pounds at this point, the freight being, say, 10 cents a hundred to either of the competing points, if the trust price to those points should be $5 10 per 100 pounds, then would Boston and the local jobbers be put upon an equality in competing for business in those markets; Boston jobbers, being such heavy buyers, feel that they have a right to the local market, in which, under such an arrangement, they would have an advantage. A similar arrangement to any competing point would seem to be the most fair that could be devised. No action will be taken by the paint and oil associations probably until the trust shall have announced its plans, but should not some such equable arrangement be conceded, it is thought the trade will take up the matter in its local and national associations and urge it upon the trust."

### More Alleged Imported Glass Workers.

In its current issue the *National Glass Budget*, which is strongly opposed to the employment of foreign glass workers in this country, when they come as did the Englishmen whose case is now before the Treasury Department, claims to have information from reliable sources that 160 blowers, gatherers and cutters have arranged to come to this country from Belgium. They have secured reduced rates, the *Budget* continues, on account of the great number, and took passage from Antwerp for this country on Saturday last.

These Belgians are, however, reported to be coming on their own means, and as yet no evidence has been secured of any contract. It is not thought that the Manufacturers' Association is bringing them over, as the members of that body claim that in the present condition of the glass market, it would be unwise for them to resume. It is stated that some of the Belgians are to go to Delray, Mich., where a window glass firm have discharged all their old blowers and openly stated, according to the *Budget*, that they would hire only Belgians in the future, because the firm believes them to be more manageable. Whether any of the men were intended for the second tank at Jeannette is not now positively known. Had all the manufacturers resumed on September 1, it is probable that the Jeannette people would have found it difficult to get good blowers to work on the tank unless guaranteed as much as they would average on pot furnaces.

"It would then have depended upon the action of the executive officers of L. A. 300," continues our contemporary, "whether these prospective immigrants would have been recognized as union men, or taken into the organization. They could not have very well refused to grant these new comers the same privilege which they accorded to the English window workers.

"Should the Manufacturers' Association, however, desire to hire these men, and work on a scale of their own, it would lend color to the charge that some arrangement existed by which these men were brought over in the nick of time. A cablegram sent to Europe, August 13 (the day the wage conference ended so abruptly), to the proper agents, would have given ample time to arrange matters.

"If this were the case, legal measures could not be evoked, for the simple reason that James Campbell and his Executive Board have set a precedent which virtually nullifies the law which has hitherto served as a barrier. It would in addition be harder to prove a contract in this case than in the case of the English glass blowers."

The president of the Window Glass Workers' Association pronounces the above story a canard. It is true, he says, that word was received here that a large crowd of workers would leave Belgium for this country on August 11th, but they did not come. Similar stories are started every year toward the close of the summer shutdown. He is further reported as saying: "Our office is flooded with letters from Europe notifying us of the departure or proposed departure of men who never come. It don't make much difference anyhow whether they come or not.

"They would not be allowed to go to work in any glass house until every member of L. A. 300 was employed. We are not much afraid of the manufacturers attempting to run non-union factories. As to that part of the article that refers to Delray, Mich., it is without the slightest foundation. That firm has re-engaged all of its old workmen with the exception of one, and he refused to leave the work he was at and go back into their employ. There are about 300 Belgian glass workers who live in this country, now spending their vacation at their old homes. They are now preparing to return, and it may be possible that these men have been confounded with emigrants."

### A New Hypnotic.

Chloralamid, manufactured on the suggestion of Dr. von Mering of Strassburg, is the latest new hypnotic, and seems to possess many advantages over other similar preparations. It occurs in colorless crystals; is of a mild, slightly bitter taste, but is neutral; soluble in 9 parts water and in 1⅓ parts alcohol. It is chemically affected by the presence of alkalies, but acidulated solutions can be administered.

Chloralamid is given in doses of 1 to 4 grammes (the latter the maximum), in powder form or in solution with water or wine; the effect is asserted within half an hour, and lasts from seven to nine hours. It has been successfully used by Drs. Hagen and Hufler of Erlangen, in all varieties of sleeplessness, caused by nervous conditions, neurasthenia, phthisis, heart failure, and in insomnia. It has also been employed and commendably noticed by the clinics of Strassburg, Greifswald, Giessen and Erlangen. The first supplies have been received by Messrs. Lehn & Fink.

### Graphite Deposits in New York.

A correspondent of the *Engineering and Mining Journal* says that in the Ticonderoga region of New York State plumbago is very plentiful. Mining for it has been carried on over an extensive area, but rather unsystematically, the object of all operations apparently being to get the ore as cheaply as possible, and not to develop any great reserves, until latterly, when under the direction of Mr. Wm. Hooper, than whom no one is better informed on the subject of graphite mining, and who is a man of experience, ingenuity and skill, the aim has been to connect the various workings.

At present work is confined exclusively to the deposits on Hague mountain, four miles by road from the town of Hague, a prosperous little summer resort on the shores of Lake George, ten miles from Ticonderoga. Work has been carried on here for six years on a vein of considerable size, but the operations have been on a comparatively small scale, and consequently the developments do not reveal as much as might be expected from the period during which work has been carried on steadily. Only thirty-five men are employed. Moreover, no mining is done in the winter months, the season opening in May. In 1886 a drift was started on the northeastern slope of the mountain, which has been extended to a length of 550 feet. No ore has been taken from this drift during the present season, since ore of as good a grade has been obtained from surface workings with less cost. Most of the operations at this point have been carried on in precisely this way. Outcroppings are plentiful, and as soon as a shaft or tunnel reaches such a depth or length as to become expensive, it has been abandoned and new openings have been made. The vein is strongly defined. Since the opening of the present season most of the ore has been taken from an open cut at what is apparently the extremity of the vein. This cut is now nine rods long by three rods broad across the vein, and is being opened up to the southwest, following the course of the vein in the direction of the old workings. The vein has a northwesterly pitch at an angle of perhaps 15°, and the ore "pockets" dip in the vein to the southeast.

### Green Glass-Blowers' Troubles.

The conference last week between the window and green glass-blowers looking toward a combination of forces, in order to force an issue with the manufacturers who employ non-union hands, was satisfactory to both parties, and the window-glass men promised to aid the flint-glass workers in their fight against a firm of manufacturers at Bridgeton, N. J. Chairman Coffey, of the green glass blowers who was arrested last spring on the charge of conspiracy and at the instance of the manufacturers, has gone to Scranton, where he will confer with General Master Workman Powderly relative to carrying on the struggle against the Bridgeton firm.

### Employers and Window Glass Workers' Wages.

Although no conclusions have as yet been reached on the wages question, acceptable to both employers and employes, the window glass workers a e hopeful of a solution of the problem, favorable to their interest. The Western Window Glass Manufacturers' Association met in Cleveland last Tuesday and, according to reports, decided to maintain their position of opposition to the demands of the workers for an advance. All the manufacturers present, it is stated, signed the agreement to sustain the Wage Committee in its action rejecting the wage scale of the workers for the present year.

Secretary William Loeffler said to a reporter: "Every member has signed an agreement not to start up until notified to do so by the Wage Committee. This means that the manufacturers will positively refuse to pay the advance asked." There was a general opinion that the state of the glass trade at present would not warrant the advance of from 5½ to 10 per cent. provided for in the new scale, and some doubt is expressed as to whether the factories will start up at the usual time this year, even if the wage question is satisfactorily settled.

The action of the manufacturers was precipitated by a circular issued by an extensive firm of wholesalers of Cleveland and freely distributed among those present at the meeting. The circular read as follows: "If manufacturers decide to start on September 1 we shall issue a circular broadcast, offering glass in any quantity at 80 and 15 single and 85 and 15 double strength. Much as we regret the necessity for such action, we have a choice of two evils: To sacrifice the glass now or hold and inventory it at an actual loss on January 1."

Such a reduction of prices, would, it is believed, mean a heavy loss to many manufacturers, and this has given rise to the belief that they will postpone the date of resuming operations.

Reports of the session say it was exceedingly heated and that some very plain talk was indulged in. Some members were charged with willful cutting of prices, and the retort was: "The new factories must have business." This feature of the trade was vigorously deprecated by some of the older members, but that offered no solution to the question.

The circular above referred to is thought to be evidence of the demoralization of trade which prevailed during the last fire. During the discussion a Fostoria manufacturer is reported as saying that he intends to build tank furnaces, accept the tank-furnace scale and go to work: "but," said he, "as long as I have the old pot I'll not light a fire for less than a 5 per cent. reduction off our last year's scale."

Such a full representation of the membership of the organization never gathered together at one time before. Pittsburgh manufacturers were there en masse and all the firms in the Central district, as well as the majority of those in the Western district are represented. Those present were A. C. Dravo, of S. McKee & Co.; William Loeffler, of R. E. Schmertz & Co.; James Scully, of William McCully & Co.; Thomas Wightman, of Thomas Wightman & Co.; James A. Wolf, of Wolf, Howard & Co.; C. Ihmsen, Jr., of Ihmsen & Co.; W. S. Cunningham, of Cunningham & Co.; C. W. Phillips, T. O. Campbell, of Campbell & Co.; Samuel Frank, of D. O. Cunningham; James Stewart, of Stewart, Estep & Co., all of Pittsburgh; Manager Fish, of the Keystone Glass Company, Meadville; Superintendent Gray, of Kerns, Gorsuch & Co., Zanesville; T. D. Cattlin, Ottawa, Ill.; Leopold Mambourg and Frank Copies, Fostoria; T. F. Hart, J. S. Stewart, Robert D. Lyon, Marion, O.; Hart & Co., Marion, Ind.; D. C. Bohman, Diamond Glass Company, Ravenna; E. Vanderwenter, Maumee Glass Company, Maumee, O.; John Stollberg, Toleda Glass Company, Louis Blitz, Detroit Glass Company.

## A Curious Borax Mine.

W. H. Storms writes to the Pasadena *Union* as follows: In the Calico district is a strange mine called the Borax. Usually borax is obtained all over the world by collecting the accumulations of the bi-borate of soda in the beds of dry lakes, where the borax has been left as a residuary deposit, the same as salt and gypsum. The mine referred to is a vein found enclosed in sandstone and shale, and the borax is mined the same as quartz or any other mineral; beautiful crystalline specimens of snowy whiteness are frequently found. The mine is a geological curiosity. The origin of the borax mine is simple enough. In past ages the now nearly vertical vein was a bed of borax in the bottom of a dry lake, where the deposit had accumulated by the evaporation of the waters of the lake which contained the mineral in solution. Subsequently the water spread over the land and lake, and mud and sand were carried down into the lake and the borax was covered. This process continued until hundreds of feet of sedimentary deposit had accumulated. In the course of time these hardened and became rocks. When the main range of the Calico mountains was uplifted the borax deposit was also tilted with its inclosing rocks and it now has every appearance of a vein. It follows perfectly, however, the line of sedimentation of the adjacent rock.

## Lubrication of Machinery.

BY GEORGE H. HURST, F.C.S.

Besides superintending the main processes involved in the various operations of bleaching, dyeing, and calico printing, the works manager has to provide for the lubrication of the machinery used in these operations; and although only a minor detail in the proper management of the works, it ought to have his careful consideration. Provision will have to be made for two different kinds of lubrication, one that of the ordinary machines, the other of the steam engines; cylinders. There are two sets of conditions acting in these cases which affect the oil used in different manners.

First, as to the ordinary machinery. The manager here has choice of two different classes of oils, one the fatty oils, such as olive, rape, sperm or lard; the other known as hydrocarbon or mineral oils. The first class are what have been used for lubricating ever since machinery was invented; the others are of recent introduction.

The fatty oils are numerous and have their own specific properties, and are used accordingly, sperm oil for quick-running light machinery, such as spindles; olive and rape oils for general machinery bearings; lard and animal oils for the bearings of shaftings; while for heavy engine bearings a mixture of castor and animal oils works well; and for heavy quick-running machinery, such as the cutters of dyewood, rasping mills, castor oil forms an efficient lubricant. These oils are saponifiable—that is, when treated with an alkali, they are decomposed and form soap; the bearing of this fact will be pointed out presently. When exposed on the surface of bearings and machinery they become viscid and develop a large amount of free acid, which is detrimental to the metal work of the machines, inasmuch as this free acid has a comparatively strong corroding action on metals. They are dirty oils in use, the metal work close to the bearings becoming coated with a hard gummy mass which is difficult to remove. The other class of oils, the hydrocarbon, are the refined products o paraffin shale oil manufactured in Scotland or the petroleum oils of America and Russia. These oils are generally pale and limpid; they vary in specific gravity from 865 to 890 in Scotch oils, and from 885 to 920 in petroleum oils. They are perfectly neutral, free from acid, are not altered by exposure to air, and therefore there is no tendeney to form hard masses of dirty oil; they are more cleanly in use than fatty oils, machinery keeping brighter and being more easy to clean with them. Moreover, they are perfectly nonsaponifiable. The lighter oils of 865 to 890 are serviceable for light, quick—running machinery, such as spindles, the 920 for heavy bearings, and the medium oils for ordinary machine bearings. These oils are much cheaper than the fatty oils, and most of the common lubricating oils sold under such names as spindle oil, loom oil, machine oil, are either pure mineral oils or mixtures of the two kinds. The mineral oils constitute the ideal of perfect lubricating oils when well made and refined, and it is possible to find a variety that will suit any particular kind of lubrication.

But beyond the mere lubrication of machinery there is another point of importance in connection with the use of oils for bleach, dye and calico printworks machinery. Despite all the precautions that may be taken, the adaptation of drip-cans to the bearings of shaftings, fitting machine bearings with suitable lubricators and so on, accidents will happen, and splashes of oil will fall on the yarn or cloth that is under treatment. These splashes are bad, as leading to stains and imperfect dyeing or printing, and unless removed they act as resists, and prevent the color dyeing the fabric.

The stains produced by oils show themselves in several ways. They may be oil stains pure and simple; now if these be produced by pure fatty oils they can be removed by boiling with alkali; but if they are produced by mineral oils they cannot be so removed, especially if they have remained on the goods a long time; and hence no pure hydrocarbon oil is or can be a stainless oil, although they are frequently offered under that term. Such stains can be removed to a great extent by soaking them with olive oil and then treating with alkali. Stains produced by an oil which is a mixture of mineral and fat oils are removable by saponification with soda, or, better, with lime. Mineral oil stains on cloths or yarns which are to be bleached may lead to stains of a peculiar bright yellow color appearing on the bleached goods after a time. These are owing to the action of the chlorine on the oil which has not been removed in the alkali boils, and forming products that turn yellow on exposure to air and light. Such stains are difficult to remove and probably only can be by soaking the goods in olive oil and then boiling with lime and soda. Sometimes these splashes of oil lead to the production of metallic stains, especially if fatty oils are used for lubricating the machinery. These oils will dissolve some of the metalwork, and if any of it gets on the cloth, then boiling with soda or lime only removes the oil, but leaves the iron, etc., behind, and we get iron stains or copper stains on the cloth. Such stains are by no means easy to remove, local treatment with acids, followed by copius washing, being the only remedy. Care should therefore be taken that there is little or no chance of oil splashing or dropping on to textile goods; all shafting bearings should be properly fitted with lubricators and drip-cans, and they ought to be frequently cleaned. The bearings of the machinery should be fitted with lubricators and also they ought to be cleaned frequently so that there is no loose oil about any part of the machine.

For lubricating the cylinders of steam engines there is only one perfect class of lubricants, the hydrocarbon oils, which, under the name of cylinder oils, are specially prepared for the purpose. They are best applied by means of the now common sight-feed lubricators; they are clean in use, keep the surfaces of the cylinder bright, and do not tend to form cakes of dirty, greasy matter in the inside of the cylinder. Before the introduction of these oils, tallow and neatsfoot oils were most used, but these oils under the influence of heat and steam tend to decompose into fatty acid and glycerine, and the former, setting into a cake in the crevices of the cylinders, very frequently lead to corrosion of the metal, a thing to be avoided. These oils were, therefore, somewhat dirty in use and required the cylinders to be frequently cleaned out, whereas with hydrocarbon oils such frequent cleaning is not necessary: it is sometimes noticed when a change is made from tallow to a cylinder oil that the cylinder works dirty; this is due to the fact that the oil is working out the old deposits of fat, and when these are all worked out the cylinder will then work clean.—*Exchange.*

## A Flowing Petroleum Well near Titusville.

Following is an account of the well struck near Tivusville last Thursday as given in the Titusville *Herald* of Friday:

The talk of the city last evening was the well struck yesterday between this city and Boughton switch. All kinds of rumors were afloat regarding the output of the gusher and great anxiety was manifested by all to learn the exact facts regarding it.

The well is owned by Jonathan Watson, Robert McKay and E. T. Roberts, and is located on the right bank of Oil Creek, about sixty rods below the wells owned by J. P. Crossley and from three-quarters to a mile southeast of the old Drake well. The land was formerly opened by Brewer & Watson and was at one time leased by Everleth & Russell. The bank on which the derrick stands at one time helped form the boundaries of what was known as the "lower dam," a place familiar to all old oil and lumbermen.

The well was finished and tubed on Tuesday last and the time since then, up to yesterday morning has been devoted to trying to exhaust the salt water, a vein of which was tapped in the third sand at about the spot where the oil is supposed to come in. About eight feet above the sand a large output of the bring fluid was found. This was cased off. The distance between the bottom of the casing and the point of finish is only about thirty-eight feet, the sand being thirty feet in depth and of a splendid quality—loose, white and crumbly.

Up to yesterday morning no signs of oil in any quantity has been observed.

The rods had been kept bobbing incessantly and the output of salt water seemed inexhaustible. At that time oil began to come up through the casing. The volume came with sufficient force to raise the tubing from the casing head. It would flow a few minutes and then subside. The beam was kept going and at intervals the oil would boil up over the casing. This maneuvering continued all day until about 4 o'clock in the afternoon, when the climax was reached. With a rush and roar the oil began to come with great force through the casing. Connections were made to a 40-barrel tank, which was filled with good, clean oil in exactly twenty-two minutes from the time it was turned in. Still the flow continued the full size of the tubing connection from the casing head. No tankage being at hand, the pipe was shifted around and the flow directed into the creek. The fluid coming through the casing was solid oil, there being no water in it. Reports received from the well at 10 o'clock last evening were to the effect that there was no diminution in the output.

Mr. Johathan Watson, who may be said to be one of the oldest and most experienced oil men in the country, was quite elated last evening over the outlook and was flying around looking for tankage. Many theories are advanced regarding the strike. The above report of the doings of the well during yesterday is not exaggerated.

## Oil the Coming Fuel.

It is our belief that the use of petroleum as fuel is to play a far more important part in mining operations than it has done hitherto, though the use of oil fuel was crudely essayed as early as 1865 in this country, and also in France in 1868, with the apparent result that it could not be brought to compete with coal anywhere. The heating power was found to be very much greater than coal, but the cost of crude oil more than over-balanced the gain in other directions. In Russia, however, petroleum soon established itself as the cheaper available fuel.

At present, the subject is reassuming public interest with the success that has attended numerous experiments made with Ohio oils of the so-called Lima district, for example, at Detroit in the instance of the Michigan Carbon Works, whose official report shows that the same industrial results were attained there by the use of Ohio oil at a cost of $862.40 that had entailed a cost of $1,300.60 with coal. Another experimeat made by the Franklin Moore Company, Winstead, Conn., with a forge fire showed a cost of $1.22 for seven days with oil as fuel, against a cost of $2 63 with coal. The Ohio Ashtabula Tool Company, which employ fire in welding, tempering, brazing and general work in iron and steel, requiring a quick, high heat, reports through the president that they use the crude Lima oil for less tha a sixth the cost that the same work would be with coal—getting a better and more even heat than with the best Lehigh egg coal.

It is reported that the North Chicago Rolling Mill Company supplanted coal with oil last year with an established saving not only in the cost of the oil as compared with coal, but a large one in the number of men employed, or as high as $76 per day; oil which cost $1.02, achieving as much as coal that cost $2.15.—*Mining Record.*

## Petroleum as Fuel.

The basis of New England's prosperity as a manufacturing district was laid by the possession of cheap water power. But at present in round numbers two-thirds of the motive power employed in Massachusetts is furnished by steam and one-third by water. Thus the question of obtaining cheap fuel has become one of great importance. Of late years petroleum has attracted attention as being more economical than coal. In the first efforts to burn it a preliminary preparation of the oil was considered essential. The general result of these experiments was unsuccessful. The generators used to convert the oil into gas or vapor would clog and the process was expensive. A great deal of money was sunk by the investigators.

The first successful method on a large scale to use petroleum as fuel was that employed by Urquhart in Russia on the Grazi Tsarit Railway. His system combined the features of the burner to convert the oil into spray, or a finely divided condition by steam, the burner located where it would not become hot or clog, and a mass of fire brick in the chamber to radiate the heat. The Urquhart burner consists of two tubes, one inside the other, the inside one filled with steam from the boiler, and the outside one with petroleum residuum from the tank. The inside tube forms a fit against the outside tube, which prevents the oil from passing through the combining tube till desired, when a worm screw serves to withdraw the inside tube, and allow the oil to pass. When an engine is cold it is connected with a stationary boiler or other locomotive for fifteen to twenty-five minutes till thirty to forty pounds of steam can be raised. In the winter of 1886 and 1887 the Pennsylvania railroad experimented with burning petroleum. The experiments were not successful; it was found that with oil at thirty cents per barrel it cost nearly fifty per cent more than with coal, to take a train 100 miles.

A recent report in the use of fuel oil in Russia states that naphtha residuum is being more and more employed as fuel. All the steamers of the Caspian, and many of those plying on the Volga, have for some time past used it as fuel. At the present time manufactories and railways are adopting it in place of wood and coal. It is also being utilized for domestic purposes in stoves of special construction. Some large manufactories in Moscow and its immediate neighborhood employ naphtha residue in their furnaces. It is kept under ground in large cisterns. It is established that the cost of naphtha dregs as fuel is about 35 per cent. less than that of wood and coal, at Moscow, which is 1,500 miles distant from the source of supply at Baku, whence naphtha dregs are conveyed by water to Nijni Novgorod, and beyond by rail to Moscow. During 1888, 867,857 tons of naphtha residue were transported from Baku up the Volga, for use in the interior provinces and in those bordering the Volga. It is expected that in 1889 the supply will exceed 1,125,000 tons. In the northern zone of the empire wood is expected to hold its own as fuel for some time to come. In the central, southeastern and eastern provinces the employment of naphtha residuum as a substitute both for wood and coal promises to attain great proportions. The nature of Russian petroleum is, however, entirely different from the American. With the latter, seventy-five per cent. can be refined for illuminating purposes, while in Russia twenty-five per cent. only will make illuminating oil while the balance, seventy-five per cent., is residuum and this is what is burned.

In this country the use of oil for fuel recieved its impulse from the opening of the Ohio oil fields. This oil cannot be used for illuminating purposes on account of the unpleasant odor which no method of refining can eliminate. Thus the Standard Oil Company endeavored to obtain an outlet for this product by securing its adoption as fuel. The first experiments were made with what is known as reduced oil that is the oil from which the more volatile parts had been removed. This oil had a sufficient flash and fire test, but it was soon discovered that crude oil was being substituted. This oil gives off heavy and combustible vapors to the extent of fifteen or twenty per cent. of its weight at temperatures from eighteen to sixty-five degrees Fahrenheit.

These being heavier than the air fall to the floor and flow in channels, thereby exposing property to great hazard should they flow toward the boiler furnaces or should a lantern be put on the floor where they have accumulated.

The matter has been the subject of correspondence on the part of underwriters with the Standard Oil Company, that it should not put crude oil on the market for fuel, and all users have been warned of the danger incurred in its use. A gallon of crude oil weighs only 6·5 pounds instead of 7·3 pounds for many grades of petroleum and as heat is directly in proportion to weight, this is another point in favor of reduced oil.

The question of economy in the use of fuel oil is one largely of locality, depending on the cost of the oil delivered at the furnace doors, compared with that of wood or coal. In this view of the case it is plain that the experience of one locality can be but a relative guide to determine its practical use in another. In a general way it may be stated that for the purpose of making steam, oil at about 2¾ cents per gallon appears to compete with coal at $4 50 per ton.

It would not seem, however, that petroleum in any event can take but a subsidiary place as fuel. Different from Russia, where, from the character of the oil, a market can be found for it in no other way, the larger proportion of the American product is too valuable for refining purposes to be used as fuel, and the whole production of the Lima oil fields would only be sufficient to supply the demands of a few of our great railroads alone. However, to the extent of the supply, the oil will be used as fuel, and in some respects and for some purposes it has advantages over coal at equal cost.

In forges the use of oil is an unqualified success. The heat is under perfect control, and is much more even, while the flame is purer. The scaling of iron is very much diminished. The experience of a large cartridge company is that they can anneal the same lot of metal in half the time by burning oil as by burning coal. The heat is so even that it softens the metal quicker. Taking oil at 2½ cents per gallon and coal at $6 36 per ton of 2,000 pounds this company estimates the difference as fifty-six per cent. in favor of oil. In forges and furnaces in general, it is estimated that a saving of thirty-three cent. can be effected by burning oil, taking both at the price laid down in Boston. Under boilers the saving is not so much.

There is a great saving in the labor of handling coal and removing ashes. Cleanliness is also attained. Combustion is so perfect that there is no smoke nor soot, and the regular and frequent cleansing of the boiler tubes is dispensed with. This difference is best appreciated by stating the experience of the North Chicago Rolling Mill, where they have dispensed with twenty-one men out of twenty-five formerly required to run their boilers with coal. On a smaller scale near this city where before the engineer and fireman had constant employment, the engineer alone finds it a very easy task to run the boilers since oil was substituted.

Experiments made by the Boston Heating Co. with oil as fuel showed 15.65 pounds of water evoporated to a pound of oil consumed. The tests were made with two boilers of 100 horse power each under 200 pounds pressure and the experiments covered the space of two days.

The Union Steel Works of Chicago under average conditions evaporated 18.39 pounds of water per pound of oil fuel, while 11.5

pounds of water evaporated by coal is attained only by the best boilers.

There are three ways in which a loss of fuel occurs: (1) In the smoke and cinders and gases which escape up the stack, (2) The cinders which are carried off by the draft, and (3) the fuel that drops through the grate. In burning oil this waste of fuel is avoided, as almost perfect combustion can be attained through the control which the engineer has over the supply. The first sign of smoke shows that too much oil is being used and the amount can be immediately regulated. This perfect control over combustion insures another great saving, i. e., at the safety valve. During experiments at New York it was found that 25 per cent. more water was required to do the work with coal than with oil. The reason of this difference being in the waste at the safety valve when coal was employed. By the use of oil economy of space is obtained in the handling and storage of fuel and the dirt incident to it avoided. The safety from sparks attained by using oil has caused it to be used in traction engines. One of these is now being built here for use in California. It will draw ten plows and there will be no danger of its setting fire to the prairie.

The form in which oil is used is practically by means either of steam or air injectors. In the former the steam is supplied by the boiler but the aerated system worked by compressed air is claimed to be more economical, while for forges it is said to be preferable. The compressed air or steam passes out of a jet into the fire box; a fine brass tube from 1/8 to 1-32 inch, according to the work required, has an orifice in the jet and the oil is sucked out on much the same principle as that used to aspirate cologne out of a bottle. The compressed air or steam is employed to break up the oil and atomize it for burning. The question as to whether the steam or aerated process should be used is one of technicalities. In some foundries the crude oil is fed to the furnaces without being vaporized, with good results.—*Boston Com. Bulletin.*

## An Attack on the Standard Oil Company.

A discussion on trusts was held at Chautauqua, which, however, degenerated into an attack on the Standard Oil Company. The discussion was the outcome of an intemperate attack on the same concern a few days previous, the listeners of the previous tirade being desirous of hearing the matter fairly discussed. The assailant of trusts was Dr. Washington Gladden, of Columbus, O., and the defender Mr. George Gunton, the well known writer on political economy of this city. Below we give an abstract of the discussion as given in the reports to the daily papers:

Dr. Gladden said that the debate was simply an inquiry after truth, and that if his opponent was able to state more truth in the allotted time than he was, he should have his applause. He continued: "My friend devoted much time the other day to proving that concentration of wealth was a blessing. This I had already admitted in a previous lecture, and what he said about factories I was also disposed, on the whole, to agree with. The disadvantages and drawbacks of the institutions, however, I think he did not adequately state. He forgot to say that while they preached inter-dependence, their tendency is to eliminate independence. I know from my own constant acquaintance with the laboring classes for thirty years, that the massing of labor in corporations has an evil effect, and that the introducing of the immoral impersonality of combinations must work for harm in many ways. I contended also that trusts do not always stop at suppressing unwholesome competition, but that on the contrary, the object of those who organize and conduct them is altogether to suppress competition, which they have already done. Is there any effective competition with the Sugar Trust, which claims to control eighty-five per cent. of the sugar in the United States? Is fifteen any fair match for eighty-five? And is it a wholesome thing to put eighty-five per cent of the production of a necessity of life into the hands of eleven irresponsible men?

"The Standard Oil Trust claims to control about seventy-five per cent of the refined oil of the country. I think it can be shown to control ninety per cent. Is it safe to put that power into the hands of a secret company of men who never show us their books, and whose business we know nothing about? The table on the first page of the Standard Oil Company's own pamphlet shows that the annual percentage of reduction in the price of oil was ten per cent before the formation of any combination, and for the next nine years only seven per cent, while since 1881 it has been only about two per cent, and the whole of this reduction is due to the reduction in the price of crude oil, for which the trust was not responsible. The cost of production and the cost of refining and transportation has decreased. Figures have been adduced to show that there has been a reduction, but that is Standard Oil arithmetic. If the price of refined oil had been reduced in proportion to the reduction of the price of crude oil, the price would be to-day 4 1-100 cents a gallon instead of 6 72-100 cents. Instead of giving the public $100,000,000, as their attorney claims, they have taken $27,000,000 more than they were entitled to. When the Sugar Trust was formed certificates were issued in vast excess of the stock of the original companies. Their purpose is, so far as possible, to suppress competition. The North American Salt Company proposes to take into its hands at once at least seven-eighths of all the salt wells in the United States, or the output of 130 salt wells which they control. What effective competition can be brought to bear against such an organization as that? They have seen and know what power a trust possesses to exterminate competition, and multitudes of refineries and laborers are idle to-day who have been driven out of work by these trusts."

Mr. Gunton responded to the call of time. He began by saying: "Dr. Gladden asked you, What is the effect of a trust? The object of every business man is to make money. He is not considering the community, and his only object is to get control and prosper. But all men are subject to social laws and influences which no Legislature can control. The question is not so much what trusts would like to do, but what their effect will be. Dr. Gladden says they want to suppress competition, and he quotes from a Standard Oil pamphlet and says he can't understand the arithmetic. The reports of the daily commercial journals will give you every day the market prices, and the produce exchange reports can be traced back to the beginning. So that there is no need to depend on the Standard Oil Company. The table he quoted to show that the price of refined oil had not fallen as much as crude oil asks us to apply proportion to show what the other reduction should be. Now, friends, that is the trick of trade. He made those facts be like darkness when they are as true as daylight. He says the percentage should be the same. But let's take the percentage on 20 and the percentage on 4; are they alike? Is a reduction of 5 cents on 20 equal to 1 on 4? That rule would show that the rise in wages here is only the same as that in Russia. It is as dishonest as any statement ever made to say that a quarter of twenty is equal to one-fourth of four. The *Journal of Commerce* reports, and an article I have recently published, on which I spent three months' labor, will show that in 1880 crude oil was 2 31-100 cents per gallon; in 1889 it is 2 45-100, actually 14-100 cents per gallon dearer to-day than in 1880. Refined oil is more than two cents cheaper than in 1880. Now what becomes of Mr. Gladden's arithmetic? Is there any arithmetic that can be dealt with either by clergy or laymen which will show that nothing is equal to 20? Where does his $27,000,000 come from? Can you find it out of zero? Can you find it out of nothing?

"I have investigated monopolies other than the Standard Oil Company. In 1866, just before the Western Union was organized, it cost $2 10 to send a message from New York to Chicago; in 1889 it costs 40 cents. To St. Louis it was $2 55, but Dr. Gladden pleads for fair competition. Now, the Standard Oil Company is practically the greatest monopoly in Dr. Gladden's sense that there is. It has kept competition out by sheer superiority in supplying the community better and cheaper. If it hadn't reduced prices, the capital of Europe would have been organized against it, and it would either have had to reduce the price or else bought out its opponent. I don't believe it ever did anything with the object of benefiting the public, but sheer selfishness has caused it to do so. Facts show that every trust has learned from deathly competition by the public that the only thing that can keep them alive is their better service to the community. What becomes of the undersold man? One of two things: If you keep him in his business, it will cost more to sustain him by his fabulous prices than to maintain him as a pauper; and to take care of him is to put a premium on incompetency and a deadlock in the way of progress."

Dr. Gladden, in reply to Mr. Gunton, asked, "How many paupers do you think we could afford to produce in America for the sake of having oil a few cents cheaper? It is a pretty serious thing to manufacture paupers, and by depriving men of their business incentive you practically make them paupers. As to Mr. Gunton's treatment of the figures, I stand by every word that I uttered. I am away from my own books and documents. I didn't come to Chautauqua especially to debate, as he did, but the Standard Oil figures are the only ones I could lay my hand on, and I accept them as accurate. The Standard Oil Trust has more alliances in this country than any horse-thief ever had. Their contracts with railroads show that illegal rebates from the gross rates were contracted for, and that there was an agreement to co-operate against loss or injury by competition and raise or depress rates, as far as necessary, to that end; $1 06 was to be returned to the company on every barrel by that contract; and their profits in this way alone have amounted to at least $10,000,000 in eighteen months, every cent of which was taken, not by stealth, but by absolute robbery from the public. They are afraid of public opinion, which they think will crystalize into law, as it must; and this is the only reason they do not push their corruption further. Our own safety is in establishing a tribunal with full powers. You have the power in your own hands and you are fools to let these great corporations extort from you."

Instead of argument Dr. Gladden resorted to vituperation and vilification, which was evidently relied upon as acceptable to the audience. Mr. Gunton replied in substance as follows:

"Don't applaud. I have no time to waste. How about the facts? For Dr. Gladden to say that he stands by a statement which he absolutely refuted by the facts is dishonest. Are you to alter the law at the instance of a demagogue that says two and two makes five? Whatever there was of rebating has been abolished by the Interstate Commerce Law. But I think there is a very bad principle under that law. Will Mr. Gladden expect to get as good terms for large business as for small business? That is a moral law in commerce and I believe I can prove to you that there is no vicious principle involved. That is all there is of that question and it ought not to be talked about. Approach the matter if you approach at all, with this point in view: What are the general tendencies and results of this line of business? I submit with all the candor and fervency of which I am capable, that no man has a right to appear before you who says that crude oil has fallen when it has not. When Henry George lectured about the world's growing poorer, he said: 'Facts are unnecessary.' Gladden resembles him. What you and he should find out is, what are the general principles underlying this whole subject? and next, what are the facts? and I would impress upon you whatever is done, be very careful. Be on your guard against a man who wants to set over you an arbitrary committee who shall tell you what you shall and what you shall not do. Apply the minimum government possible, for social progress depends on lessening the power of the aggregate over the individual and increasing the individual's independence."

## Cultivation of Red Pepper in Turkey.

The *Journal de la Chambre de Commerce de Constantinople* says that the cultivation of the red pepper plant occupies a very important place among the several branches of cultivation practiced in Turkey. This cultivation is chiefly making progress in the cantons of Karadja Abad, in the districts of Vardar Yenidje and of Vedine, vilayet of Salonica. Formerly the production of red pepper was unimportant, for it was limited to the requirements of local consumption in the vilayet, but since foreign countries have bought these peppers cultivation has rapidly extended. The plant itself prefers a sandy and humid soil, where it grows sometimes almost in the water. It is estimated that the plant produces from 120 to 400 okes (oke=2·84 lbs.) of pepper per deunum (deunum = 40 square paces), according to quality. On an average the expenses do not exceed 300 gold piastres for the cultivation of each deunum, and an oke of this pepper costs from 30 paras up to 5½ piastres, according to quality. The profit realized on the average is from 300 to 350 piastres per deunum. Harvesting only commences when the plants are entirely red. The produce of the first gathering is of superior quality, but that of the last is bad, as the pepper plant reddens imperfectly in the autumn. This year the yield of red pepper has reached in the canton of Yenidje Karadja Abad the figure of 350,000 okes, and in that of Vedine Karadja Abad about the same amount. Of this yield 45 per cent is exported to the west, 30 per cent to Bulgaria, Servia and Austria-Hungary, the remainder being sent to different parts of the Turkish Empire.

## Proposed Syndicate of Cinchona Growers.

Baron C. G. J. M. Von Rosenberg, of Devicolom, Madras, British India, has, according to the *Chemist and Druggist*, addressed the following appeal to the cinchona growers of India, Ceylon and Java, through the columns of the Ceylon journals:

I have no doubt there are still planters in Ceylon vitally interested in cinchona. There are certainly such in India and Java, and with the present low unit, ruin stares them in the face. Nor is there any hope of the unit rising unless the amount of bark put into the market is greatly diminished.

I believe that this can be done. Not at once, perhaps, but, by a cordial co-operation of planters, in six months' time. And who so ready, who so able to attain this co-operation as the Ceylon planters, who already have their association to work through? That is to say, when once it has been thoroughly, and in this case cruelly, brought home to them that their only remedy lies in such co-operation. Left alone, the planter, and I am sorry to say not only the cinchona planter, becomes a sort of bullock doing his daily round (I know this from my own experience), taking his bark and cropping his coffee without reference to the state of the market, and later on lamenting either the small balance of profit, or the loss. In this case, too, the co-operation would only extend to a few hundred planters and to the produce of some few millions of lbs. It would also, I am almost certain, receive the cordial support of merchants, brokers, and even purchasers of bark, for everybody will benefit by a rise in prices. Not the consumer of quinine, you will say, but, judging by druggists' prices, he would not benefit even if the unit were to go to a half-penny; and the consumer must help himself. For us producers, charity begins at home.

Now, I would point out to all bark producers, and they will readily assent, once it is insisted upon, that at a double of the present unit half their bark will be of greater value to them than the whole of their bark at the present unit.

Let us take a lb. of bark, analyzing 3 per cent., at the present unit: this would fetch 3¾d., or presumably only 3½d Now supposing the unit were at 2d., half a lb. of this bark would fetch 5½d. Again, take the cost of putting into the market at 2d. per lb. (I am working on my own figures): then on the one lb. of the bark at the present unit 1½d. is netted, while a profit of 3½d. would accrue from the ½ lb. at a 3d. unit. Work this up or down according to analysis and it will come to nearly the same result; if anything, it is in favor of the lower analyses which prevail in Ceylon and parts of India.

Now, I am certain that, if half the amount of bark now put into the market were shipped from Ceylon, Java and India, a 3d. unit would be the result; perhaps not immediately, but not long in coming.

Besides, the present leaden tone of the market would give place to one of elasticity and speculation, both good for the producers. I am even sanguine as to not a 3d., but a 6d. unit, and mercantile authorities would, I am sure, bear me out in this.

South America we may leave out of the question, for I doubt whether large amounts of uncultivated bark could be put into the market even at a 6d. unit. For the trade in uncultivated bark must of late years have been so disorganized that it would take time and money to reorganize it.

I have tried to show how, if only half the present bark were put into the market, it would inevitably benefit the producer. Now as to how this might be accomplished. Fortunately we have, as I have said, powerful "planters' associations" to help us, and we have planters' "esprit de corps," and it is to the latter that I would especially appeal, for I know how great it is among planters. There is a planters' association in Java, too, and I think the present unit will find them ready to aid in cordial co-operation. It would necessitate, then, a co-operation between all the planters' associations of those districts of Ceylon, Java and India in which cinchona is cultivated, and a unanimous resolution that only half the amount of bark estimated as crop produce should be cropped and shipped. The word of planters should be taken in this case; and should they only be managers, they could easily point out to their employers the advantages accruing and get their sanction. There would always, of course, be a few black sheep who would send in the whole of their bark on a rise of the unit. But, being a planter myself, I believe their number would be limited, and even of that number a great many would be prevented by fear of association censure. In the first place communication would have to take place between associations, and if success be deemed possible, negotiations between their executive members and other members would have to be opened, and the results transmitted to some central secretary of association decided upon. This would have to be done in Ceylon and India to begin with, and then communications would have to be entered upon with Java. It might even be possible that a special mission to Java would be necessary, but if a unanimity were arrived at between Indian and Ceylon cinchona producers, no difficulty ought to arise in finding the funds for such a mission. And the fact that such an agreement had been entered into by Ceylon and Indian cinchona planters would make an adhesion of the Java planters very nearly certain, if it were pointed out to them that a final decision on the campaign depended on their hearty co-operation. The matter requires a start; but, as soon as that is made, and with a little pluck, I believe it will lead to success. Being largely interested in cinchona estates I am trying to make that start. I shall be very glad to receive any communications from the various (if such there be) planters' associations in Ceylon, and, through the planters' associations in India, do my best to further the cause. For this purpose I subjoin my full name and address.

Will you allow me to further state that, although very greatly interested in this question, I am not trying to work for myself only. My bark analyses 3 to 3½ per cent. original and 5 to 6¼ per cent. renewed; so I could well wait until the rush of bark at unprofitable prices had passed. But meanwhile many another who is only getting 2½ per cent. all round is going to the wall. In conclusion, I may say that estimates of full crops, and therefore half crops, to be put into the market, should be arrived at by the associations, and that the latter should, as bodies of honorable men, guarantee the same, by whatever means they got their facts.

I would add that the term of such co-operation could not be indefinite, and think that two years from date of the general agreement should be fixed as a limit. I am certain that this term would be sufficient to right the market.

## PAINT MARKET.

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 49.*

TUESDAY EVENING, Aug. 27, 1889.

### White Lead, Zinc, Etc.

Pig lead has been very quiet since the date of our last, and no sales of consequence have come under our notice. The tendency of the market is downward, although there has been little quotable change in prices, the closing quotations being 3 90c asked, and 3 87½@3 80c bid for spot, and 3 87½c asked, with 3 82½c bid for September. Messrs. Everett & Pocet report the Chicago market on the 24th instant as easier under more liberal offerings, the spot quotations being 3 75c, at which some 300 tons sold. In St. Louis business was light, about 400 tons changing hands at 3 70c.

White lead is moving steadily into consumption on moderate jobbing orders and with no new developments to disturb the market prices may be called firm. We continue to to quote 7½c for lots of less than 500 pounds. A rebate of ½c per pound will be allowed on all purchases of lead of 500 lbs and over if paid within 30 days of date of invoice, but not otherwise. Terms, on lots of 500 lbs and over, 60 days' time, or a discount of 2½ per cent will be allowed for cash in fifteen days from date of invoice. To buyers of a total of ten tons of pure lead during the year, counting all brands, an extra rebate of ¼c per lb will be paid, payable July 1st and December 31st, provided deliveries have been made of such quantity prior to each of those dates.

American oxide of zinc has been in fair request, considering the season, at steady and unchanged prices. French zincs have been advanced all along the line, with stocks in fair thongh by no means excessive demand.

### Dry Colors.

REDS.

The general market for dry colors has not altered in position to any material extent since we last wrote, and no new features have transpired. The trading has continued only moderate and in a jobbing way, no evidence of activity being as yet apparent. Prices are without change.

English Venetian reds have continued in moderate jobbing demand at former rates, but we are not apprised of any large sales. Domestic kinds have been inquired for in the regular way for consumption, but the business has been accomplished without comment and at unchanged prices.

Orange mineral is still in only light supply, owing to short shipments. There has been no special inquiry for parcels, as it is well known that they are unavailable in any quantity. The ruling quotations are identical with a week ago, at which prices jobbing sales are reported to a moderate extent.

Quicksilver vermilion has ruled firm throughout the week, the crude material still being quoted at excessive figures. A fair jobbing demand has existed, but the same has been supplied in the regular way at former prices.

Cobalt oxide, as expected at this season, is quiet and wholly without feature, the outside trading being of only moderate proportions. Previous figures rule.

Red lead and litharge have not altered from a week ago. The same moderate jobbing trading reported at that time, has continued throughout the week, at unchanged figures, while the market has been particularly bare of items of interest.

Carmine has sold moderately in a jobbing way, but the market still lacks interest. All sales have been accomplished at previous rates.

BLUES.

Dealers in the several articles constituting the market for blue pigments, characterize the position of affairs as barely satisfactory at the present time, but express an opinion that the trading, ere long, must show a material improvement in conformity with the usual course of the market, at this time. Sales during the week have been principally in sufficient quantities only to supply immediate requirements, while prices have continued at former rates.

GREENS.

Green pigments have been taken in the usual quantities required at this season, but the market is yet without activity or special feature, while prices are identical with a week ago. The demand for paris has slackened off somewhat, the wants of consumers having been supplied. The increase in the demand came most providentially for dealers who, within the past fortnight, have delivered an immense quantity of the article.

### Miscellaneous.

Sulphate of Barytes—There has been no movement of any moment during the interval, the trading being confined to small jobbing proportions. Prices are unchanged.

Chalk is very quiet, there being absolutely no trading whatever, no stock being offered and none wanted. We treat the position of the article in our editorial columns.

China Clay—Freights from clay ports are very different from those at London and Liverpool, they still being stiff and high. The full supply on spot, however, precludes the possibility, at the present time, of any advance being made in the asking rates of clay. The demand is fair and of a jobbing description entirely. Quotations are unchanged.

Talc—The market continues without animation. The prices are unchanged, though there is practically no business doing.

Terra alba is reported in rather a depressed condition at the moment. There is no surplus stocks of the best grades on hand, but some of the other kinds are available in quantities. Quotations are merely nominal for round lots, as in order to consummate sales concessions would probably be granted. Jobbing parcels, however, are held at quotations, which are identical with a week ago.

Whiting has been enquired for to a moderate extent, the market not being active at the present time. It is said that low prices are being offered as an inducement to buy, in certain quarters, and that quotations are merely nominal.

### Clues.

The fair jobbing business reported in our previous issue, has continued to exist, but the market as yet shows no evidence of activity. Prices are ruling steady, and show no change from a week ago.

### Glass.

WINDOW GLASS.

As the fall season approaches there is a gradual improvement in the demand for window glass. Importers find little difficulty in obtaining full prices, and in fact refuse any bids under the quotations fixed some two weeks ago. Dealers in American glass evince a firmer feeling, in spite of reports from manufacturing centers, but as yet they have not


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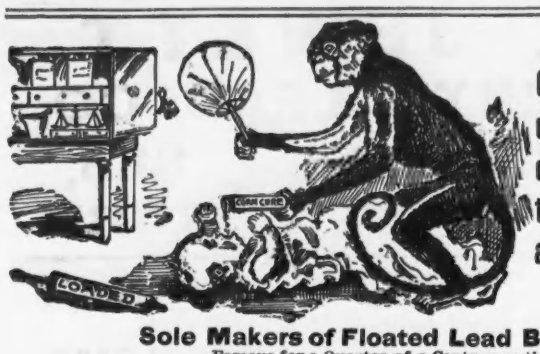


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succeeded in advancing prices. The situation is reviewed at some length in our editorial columns this week.

PLATE GLASS.

Since the transfer of the stock of the foreign agency to two local dealers the market for plate glass has been firm and an improved demand has been noted. One of the purchasers of the stock above referred to states that it amounts to a total of only 75,000 square feet instead of 200,000 as at first reported. In our report of the transaction the name of Messrs. Holbrook Bros. was made to read "Brooks Bros." by a typographical error.

### American Plate Glass.

One of the leading daily papers in Boston, in commenting upon the withdrawal of the American agency of the London and Manchester Plate Glass company, the details of which were first made public through the columns of the REPORTER, says that an important element in determining the cost of the plate glass is the matter of fuel. The cost of labor abroad being much cheaper than in this country, our American manufacturers of plate glass, despite the protection afforded them, made but slow headway in the face of foreign competition, until the discovery and practical utilization of natural gas as fuel gave them a great impetus, and marked the beginning of the decadence of foreign importations. Moreover, our domestic manufacturers gave their attention to the application of new methods and new devices to facilitate the production of plate glass, with the result that their plants are now the best equipped in the world, and the character of their product is equal to the best that is produced abroad. In addition, the price of plate glass has steadily fallen during the past decade, and especially has this been the case during the past two years. In consequence of these conditions foreign manufacturers have foreseen that the market in this country was gradually slipping from them, and importations have gradually fallen off. For the year ending June 30, 1888, the importations of fluted, rolled or rough glass were 4,035,242 square feet; of unsilvered plates, 3,955,201 square feet and of silvered plates, 4,923,167 square feet. For the year ending June 30, of the current year, the importations were, respectively, 2,702,870 square feet for rough glass, 3,029,807 square feet for unsilvered plates and 3,211,067 square feet for silvered plates. While these figures show a general decrease in the importations of plate glass, they do not give a criterion by which to estimate the decrease in the importation of window plates, for a large per cent. of the importations of unsilvered plates were for use as mirrors, being silvered after importation. In the production of mirror plates, foreign manufacturers have longer continued to maintain their supremacy, while they have had to yield to domestic manufacturers in the production of window plates. But at this point, too, importers realize that the days of their control of this market are numbered, for American mirror plates are fast coming to equal the best imported plates, as manufacturers are fast coming to obviate the difficulty in regard to color, against which they have heretofore had to contend.

When, some two years or so ago, the manager of one of the English plate glass companies came to this country to wind up the affairs of its Boston agency and withdraw from the country, he visited the several American plate glass works and subsequently stated that he there noted plates that were put upon the market as window glass which in England would be considered suitable for mirror plates. Thus it would appear that in all departments of the production of plate glass American manufacturers bid fair to control the home market, and in the quality of their product successfully challenge comparison with the best that the Old World can show.

### TOTAL DOMESTIC RECEIPTS.

FOR WEEK ENDING AUGUST 26, 1889.

| | | For week. | Since Jan 1. |
|---|---|---|---|
| Alcohol | bbls. | 975 | 18,335 |
| Ashes | pkgs. | .. | 2,449 |
| Beeswax | pkgs. | 34 | 622 |
| Borax | pkgs. | 120 | 27,319 |
| China clay | cks. | 198 | 4,955 |
| Cottonseed | bags. | .. | 3,916 |
| Meal | bgs. | .. | 8,641 |
| Cake | bgs. | . | 47,160 |
| Soap stock | bbls. | .. | .. |
| Flaxseed | bush. | .. | 272 |
| Grease | pkgs. | 537 | 26,147 |
| High Wines | bbls. | 1,082 | 145,013 |
| Lead | pigs. | 8,551 | 293,280 |
| Mustard seed | bgs. | .. | 12,501 |
| Oil, Cottonseed | bbls. | 1,561 | 39,272 |
| Lard | bbls. | 343 | 5,162 |
| Linseed | bbls. | .. | .. |
| Lubricating | bbls. | 322 | 16,125 |
| Cake | bags. | 150 | 276,529 |
| Oleo stock | pkgs. | 475 | 23,886 |
| Pitch | bbls. | 15 | 2,995 |
| Quicksilver | flks. | .. | 1,955 |
| Rosin | bbls. | 6,935 | 161,087 |
| Stearine | pkgs. | 376 | 3,977 |
| Sumac | bags. | 110 | 4,235 |
| Tallow | pgs. | 790 | 36,408 |
| Tar | bbls. | 796 | 20,423 |
| Turpentine, crude | bbls. | .. | 756 |
| Spirits | bbls. | 1,944 | 59,288 |

**Red Oxide of Iron.**

Warranted Unequalled in Body, Strength and Fineness.

**70 Per Cent. Iron** and **Free From Sulphur.**

Grinds smoothly with 18 lbs. oil to 100 lbs. oxide.

**CLINTON RED HEMATITE,**
For coloring Mortar, Brick, Tile, etc., equal to Turkey and Florentine Red.

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**JONES & CO.'S**
**Paste Oil Stains**
Save Consumer 50 pr. ct.

ONE POUND MAKES ONE GALLON.

This stain reduced in spirits turpentine, four to twelve quarts to the pound, without dryer, produces the most delicate natural cherry or the deep rich effects to suit.

Made in Cherry, Mahogany, Walnut, Light Oak, Antique Oak, &c.

Sample cases (100-1s) delivered in any part of United States at regular wholesale price.

Jones & Company,
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BOSTON, MASS.

ESTABLISHED 1858

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(Sons of the late ROBERT PRINCE, Original Manufacturer.)

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An Indestructible Coating for TIN, IRON and WOOD.
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BROKERS, MANUFACTURERS' AGENTS AND IMPORTERS IN
**Paints, Oils, Clays, Barks and Chemicals**
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We are prepared to quote the trade and large consumers.
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**MARSEILLES GREEN**
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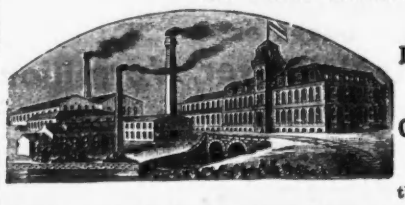

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Dry Greens, Yellows, Vermilions, Carmines, Lakes, &c.
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Received Highest Award GOLD MEDAL at the World's Exposition, New Orleans, 1884-5

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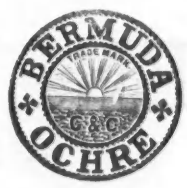


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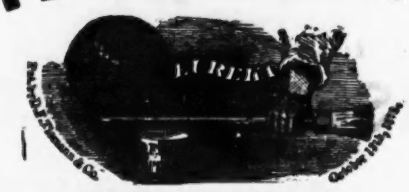


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They are Free from Chemicals.
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They have great Body and Weight.
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STRICTLY PURE **PARIS GREEN,** Cardinal Vermilion, Versailles Green.

**DRY COLORS** of every description for **GRINDERS** use.

## OIL MARKET.

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 49.*

### Vegetable Oils.

TUESDAY EVENING, August 27, 1889.

The easy tendency in prices for most vegetable oils, which was noted in our last issue, is more pronounced in linseed and cotton oils, and sales of the latter are restricted because of the irregular course of the market and consequent lack of confidence. Trade generally is quiet.

The local linseed oil market has not been altered since last writing, but the Chicago prices have been dropped 2c, which action was expected about this time. City crushers are still firm in their demands of 60c for raw Calcutta seed oil, and that figure will probably remain unchanged for some time, while a different schedule will be adopted for oil from domestic seed when it is ready to be offered. A temporary firmness is to be noted in the offerings of State oil for September delivery; it is stated that the amount offered at 56c has been absorbed by recent purchases, and that 57c is the lowest figure which will be accepted for New York delivery next month. The spot price for out of town oil is also 57c. Later developments in the movement to combine the seed crushing interests of England will be found on our editorial pages.

Cotton oil values being an unknown quantity, the market is devoid of life. Buyers for local consumption are evidently awaiting developments in the near future before making contracts, as it is a difficult matter to place important lots, while in the meantime foreign markets are being supplied by liberal shipments on orders. Were it not for the movement abroad the stagnation would be very noticeable. Dealers hardly know what to quote spot supplies, as there has been no recent inquiry or the least interest manifested in available stocks. In the absence of all inclination to purchase, prices are quoted nominally at 40@43c for low grades of summer oils, 44@46c for near prime and from the latter figure to 51c for prime and choice oils. Crude oil is not offering except for forward delivery and there is plenty to be had for the latter part of next month and October, without buyers. Texas oil of new crop is freely offered at 30c at the mills or 35c for New York delivery. There is a quiet search for buyers but they are keeping in the background. The trade has been considerably amused over the reported sales of new crude at 35, 36@37c, referred to in our last issue and which were announced no doubt to influence values. No one has been found who can confirm the sales but prospective buyers are plenty who pronounce such statements as "bosh." A seller was in the market to-day who remarked that he would be happy to dispose of new crude oil at 35c for next month and October New York delivery, but diligent skirmishing failed to get even a bid, which indicates the feeling of uncertainty about future values. Some old seed is being crushed in Texas and the new crop will not be operated upon until next month.

Exports of cottonseed oil from New York by countries:

| To | For week ending Aug. 26, 1889. Gls. | Since Sept. 1, 1888. Gls. | Same time last year Gls. |
|---|---|---|---|
| Africa | .. | .. | 300 |
| Arg. Republic | 8,012 | 17,881 | 3,420 |
| Australia | 250 | 3,052 | 8,987 |
| Austria | 44,961 | 44,961 | 10,987 |
| Belgium | .. | 60,552 | 271,275 |
| Brazil | 3,060 | 8,868 | 8,591 |
| Br West Indies | 97 | 57,458 | 52,124 |
| Br Guiana | .. | 1,149 | 103 |
| Canary Islands | .. | .... | .... |
| Central America | 10 | 1,625 | 338 |
| Chili | .. | .... | 1,646 |
| China | .. | 99 | 10 |
| Cuba | .. | 149 | 92 |
| Dan West Indies | .. | 7,840 | 7,927 |
| Denmark | .. | 6,397 | 50 |
| Dutch West Indies | .. | 354 | 348 |
| Ecuador | .. | .... | 30 |
| Egypt | .. | .... | .... |
| England | .. | 219,508 | 141,467 |
| France | 24,713 | 78,313 | 678,182 |
| French West Indies | .. | 100 | 714 |
| Germany | .. | 172,149 | 77,391 |
| Hayti | .. | 423 | 2,915 |
| Ireland | .. | .... | 6,150 |
| Italy | 24,549 | 74,430 | 50,512 |
| Japan | .. | .... | .... |
| Mexico | .. | 44,672 | 8,861 |
| Netherlands | .. | 2,012,998 | 796,060 |
| North America | .. | 7,208 | 19,342 |
| Norway & Sweden | .. | 17,664 | 25,150 |
| Peru | .. | 740 | 658 |
| Porto Rico | .. | 48 | 5,966 |
| San Domingo | .. | 2,174 | 410 |
| Scotland | .. | 26,116 | 7,600 |
| Spain | .. | .... | 10 |
| Turkey | .. | .. | .... |
| U S. Columbia | .. | 1,671 | 4,387 |
| Uruguay | .. | .... | 1,200 |
| Venezuela | .. | 2,359 | 2,457 |
| Total | 355,452 | 3,288,134 | 2,581,405 |

Exports of cottonseed oil from New Orleans by countries:

| To | For week ending Aug. 23 1889. Bbls. | Since Sept. 1, 1888. Bbls. | Same time last year. Bbls. |
|---|---|---|---|
| Austria | .. | .... | .... |
| Belgium | .. | .... | 4,916 |
| England | .. | 1,800 | 500 |
| France | .. | 2,335 | 2,520 |
| Germany | .. | 300 | 1,258 |
| Gibraltar | .. | .... | .... |
| Italy | .. | 1,305 | 4,807 |
| Mexico | .. | 10 | .... |
| Netherlands | .. | .. | 21,733 |
| Portugal | .. | .. | .... |
| Spain | .. | .... | 2,500 |
| Total | .. | 5,740 | 38,234 |

Exports of soap stock from New Orleans by countries:

| To | For week ending Aug. 23 1889. Bbls. | Since Sept. 1, 1888. Bbls. | Same time last year. Bbls. |
|---|---|---|---|
| Belgium | .. | 100 | ... |
| Cuba | .. | .... | .... |
| England | .. | 6,768 | 5,277 |
| Germany | .. | 62 | .... |
| Italy | .. | .. | .... |
| Mexico | .. | 50 | .... |
| Spain | .. | .... | .... |
| Total | .. | 6,985 | 5,277 |

Cocoanut oils have a steady look, and dealers report a moderately active trade, especially in Ceylon oil, which commands 5⅝c on spot in a jobbing way, with sales at 5 9-16c and 5¼@5⅝c for stock on near-by vessel. Cochin oil is still in limited supply and closely concentrated. The range on spot is 7⅜@7½c. English oil is quoted at 5⅝c, Cuban at 5 20c, and domestic at 5@5⅛c ex store

Palm oil has a small outlet at 5⅛@5¾c for prime lagos, according to quantity.

Olive oil is inactive both here and abroad the comparatively high prices having discouraged the consumptive movement, as expected would be the case when the article got into speculative hands abroad. The principal holders on the other side hope to realize full prices at a later period, as they calculate that a certain amount must be consumed, but we are informed that substitutes are being used and this fact, if it is a fact, ought to have some bearing on the future market. This market continues to be quoted at 68@70c, according to quantity, and the quality of the offerings is said to be superior to previous years.

### Animal and Fish Oils.

For a review of the market on lard and greases, we refer our readers to an article in the editorial columns of this issue, which compares the present situation with previous years. The range of prices on fish and animal oils generally remain about the same as this time last week. The movement is lighter, but considerable inquiry is reported for next month's delivery.

Lard oil continues to be quoted at 52@53c for prime city, according to brand. Lower grades are irregular in price, and buyers are being favored. The demand for the latter is said to be greater than for prime oil, but no improvement in the outlet is reported from any source. Certain brands are being pushed with great energy and concessions are a prominent feature of trade.

Elaine oil is moving at the former price of 36@39c per gallon, and there is every indication of the steady feeling continuing.

Saponified red oil is reported in limited supply; but the candle factories are expected to resume operations next month, when the production of oil will be ample to meet current wants. Some brands are held firmly at 5c per lb, but we hear of other offerings at 4¾c. Buyers are not disposed to contract for liberal supplies at present prices.

Crude sperm oil is represented to be firmly held at 61c in New Bedford, but there have been no developments to cause a higher tendency. Exporters are said to be in the market, but are not entertaining the figure named. The stock at New Bedford remains at 15,525 bbls. The refined market is stationary at previous quotations and no change is expected for some weeks.

As there is very little stock of crude whale oil in first hands, the market is characterized by a firm feeling, but no price has been named since the last sale of northern oil in this city at 35c. No fresh arrivals are reported. The refined grades are having a fair demand at a shade under our quotations.

Whalebone is held at $3 40 per lb for arctic and a less price has been refused by a city holder, which indicates a firm market. No business has been done within the week, either here or at New Bedford. The total stock of bone is distributed as follows:

| | | | |
|---|---|---|---|
| New Bedford—Arctic, | 1,500 | | |
| " " Jap & Ochotsk, | 5,500 | 10,000 | |
| " " South Sea, | 3,000 | | |
| Elsewhere—Arctic, | 54,200 | | |
| " Jap & Ochotsk, | 1,500 | 55,700 | |
| " South Sea, | none | | |
| Total, | | | 65,700 |

Menhaden oil has some inquiry, but no transactions have resulted. Exporters seem to expect lower prices as the season advances, and are not manifesting much inquiry at present, but that is probably owing to the lack of


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Animal, Vegetable and Mineral OILS.
Valve, Cylinder, Signal, Machinery, Engine and Lubricating Oils.
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Pure Spanish and Italian Olive Oils.
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Cottonseed Oil, Cake and Meal Reginnings and Soap Stock.
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ESTABLISHED 1855.

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**Crude, Summer White and Yellow, Winter White and Yellow.**

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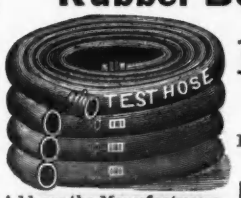


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orders. The fishing reports are still of a discouraging nature, the latest being to the effect that only 35,000 fish were caught in Barren Island during the last three weeks, while in the Chesapeake region fishing has ceased, owing to the insignificant catch. Notwithstanding the poor prospects, some holders of prime light oil are willing to accept 23@23½c. Buyers, however, claim that the oil is good merchantable, and not prime; other holders quote 24c for the latter and 22c for good merchantable. Strictly light oil is a scarce article, and will no doubt remain so during the balance of the season. Brown oil commands 21c, and is a favorite among exporters. No fresh business is reported. Pressers are strengthening their views, and a slight advance is among the early probabilities for pressed grades.

Cod oil has a small outlet at the usual rates of 30@35c, according to holder and quantity. English oil commands 33c. Advices from Newfoundland are to the effect that the fishing has been very successful, the vessels having departed with full cargoes three months ahead of time, owing to a discovery in baiting, which promises to revolutionize the cod fishing business.

## Oil Cake.

As there are no supplies of oil cake in this market and no receipts expected from the West until the new crop is ogered, values are called nominal at $25 50@25 75 per ton for western linseed cake on spot. The market is expected to open firm for new cake, as the prospective demand will be sufficient to keep supplies moving abroad.

## Wax, Lard, Tallow, Etc.

Paraffine wax has a quiet sale at previous steady prices. No important contracts are being made. Supplies have not accumulated, as the surplus enters the candle industry and is sent abroad.

Since the article on lard was written for our editorial columns, there has been an improvement in price, but it promises to be temporary, as the short interest advanced prices in the haste to cover. Western steam is now held at 6 35@6 37½c for prompt delivery, city steam at 6c and refined at 6 40@7 15c.

Lard stearine remains nominal at 7½c for city and 7c for Western, on spot. Oleo stearine is quoted steady at 6c for city and 5½c for out of town. The business is light.

Tallow is moving up the scale, being now quoted at 4¾c, with the prospects favorable for another advance before the week is out. Melters are indifferent sellers, and while exporters are in want of stock, they are afraid of pushing up prices by showing their hand.

## Naval Stores.

Spirits Turpentine—The past week has again witnessed the market on a firm basis, due entirely to the reports from and the operations at the base of supplies. Dealers here have apparently had no faith in the upholding of the present range of values, as they have held aloof from the market, refusing to buy except when in absolute need of supplies. At the beginning of the present calendar week there were evidences that the market had reached the top notch, the feeling being not quite as strong as during the previous days, and this feeling was also apparent at the close to-day, the market being quiet, with 44c quoted for Southerns and 44½c for Machines.

Rosins have continued in light request throughout the week, the trading, except in one or two instances, being confined to "retail" proportions. Prices have been exceedingly steady, however, and are unchanged from a week ago. The market closed quiet to-day, with prices held with steadiness, and quoted at the following rates: Strained, $1 02½; good strained, $1 05@1 07½; E, $1 17½; F, $1 25@1 30; G, $1 37½; H, $1 42½; I, $1 75; K, $1 80; M, $1 90; N, $2 15; W G., $2 45@2 52½; W W, $2 55@2 70.

| Stock on hand at— | Spirits. | Rosin. | Tar. |
|---|---|---|---|
| New York, Aug 28. bbls. | 1,340 | 12,134 | 334 |
| Savannah, Aug. 24..... | 9,066 | 55,911 | .... |
| Wilmington, Aug. 24.... | 6,107 | 41,640 | 1,089 |
| Charleston, Aug. 24..... | 2,545 | 20,086 | .... |
| London, Aug. 12..... | 5,910 | ... | .... |

The following is from the Savannah *News* of August 25:

NAVAL STORES STATEMENT.

| | Spirits. | Rosin. |
|---|---|---|
| Stock on hand April 1 ..... | 1,947 | 73,092 |
| Received to-day ..... ..... | 531 | 2,613 |
| Received previously..... . .. | 107,764 | 255,078 |
| Total ..... ..... | 110,242 | 330,783 |
| Exported to-day... ..... | 52 | 6,014 |
| Exported previously... ..... | 100,697 | 278,273 |
| Total..... . ..... .... | 100,697 | 278,273 |
| Stock on hand and on shipboard to-day ..... ..... .. ..... | 9,545 | 52,510 |
| Rec ipts same day last year..... | 634 | 2,197 |

Messrs. Watt & Son, London, under date of Aug. 10, say:

| | 1889. | 1888. | 1887. | 1886. |
|---|---|---|---|---|
| Stock Aug. 10.. | 5,913 | 12,675 | 8,937 | 20,718 |
| Delivered this week..... | 914 | 951 | 1,151 | 1,462 |
| Since Jan. 1.... | 38,007 | 40,943 | 44,358 | 48,862 |
| Price Aug. 10.... | 32s 0d | 28s 0d | 25s 9d | 26s 0d |
| Sept-Dec..... . | 32s 0d | 28s 3d | 24s 6d | 26s 0d |
| Jan-Apr ..... | 34s 0d | 29s 3d | 25s 6d | 26s 6d @27s |

## Clearances of Petroleum.

Following are the clearances of petroleum from the ports of New York, Philadelphia Baltimore, Boston and San Francisco on th dates named. Refined, unless otherwise specified:—

NEW YORK.

August 20

Am bg Sunlight, Georgetown, 500 cs
Am str Manhattan, Cienfuegos, 150 cs
Br str MacLeod, Batavia, f o, 62,700 cs
Br str Orinoco, Hamilton, 13 bbls, 30 pgs
Br str Cufic, Livarpool, 2,000 bbls
Ger str Harmonie, Hull, 6.425 bbls and 2,745 bbls nap
It bk Battaglia, Valencia, 20,455 cs cde
Nor bk Sophie, Copenhagen, 7,696 bbls

August 21

Am bk Mendoza, Havana, 18 tanks, 14,570 cs cde
Am bk Serene, Pt Natal, 2,000 cs
Am bk Itonus, Talcahuano, 2,000 cs
Am bk Itonus, Valparaiso, 2,500 cs
Am bk J. H. Ingersoll, Cape Town, 10,475 cs
Am sh C o Montreal, Stettin, 7,064 bbls
Br bk Shun Lee, Hull, 4,200 bbls
Br sch Harvester, St. Stephens, N B, 100 bbls
Br str Hondo, Livingston, 20 cs
Br str Hondo, Belize, 160 cs
Br str Hondo, Greytown, 16 bbls, 2,085 cs
Br str Hondo, Kingston, 205 cs
Br str Hondo, Pto Cortez, 25 cs
Br str Hondo, Sta Tomas, 2 bbls, 30 cs
Br str Cairngarm, La Guayra, 2,415 cs
Br str Cairngorm, Pto Catello, 465 cs
Br str Cairngorm, Curacoa, 21 bbls, 54 cs
Br str Cairngorm, Maracaibo, 196 cs
Br str R Hill, London, 1,300 bbls
Nor bk Wergeland, Norway, 1,822 bbls
Por bk Maria, Oporto, 2,608 bbls, 1,800 cs, 130 cs nap

August 22

Am str Raleigh, St Pierre, Martinique, 200 cs
Aus bk Heribea, Cette, 3,619 bbls cde
Br bk M J Foley, Maceio, 5,000 cs
Br sch M Purdy, St John, N B, 400 bbls
Br str Soldier Prince, Mayaguez, 50 cs
Br str A E Wright, Antwerp, 12,427 bbls
Nor str Sif, Pt de Paix, 20 cs
It bk Emilia Ciampa, Cette, 2,490 bbls cde

August 23

Am bg Akbar, Montevideo, 10,000 cs
Aus bk Vitez, Marseilles, 8,201 bbls cde
Br bk Adventurer, Brisbane, 12,500 cs
Br bk Lewis Smith, Hamburg, 6,878 bbls
Br bk Doris, Bristol, 8,618 bbls
Br sh Macedon, London, 9,848 bbls
Br sh Naucaptus, Padang f o, 52,000 cs
Ger str Energie, Harburg, 1,224,299 gls
Nor bk Grundloven, Stettin, 4,893 bbls

August 24

Am sch Nancy Smith, Santos, 8,000 cs
Am str Newport, Colon, 112 cs
Am str Newport, Callao, 12 cs
Br str Thetis, London, 1,650 bbls
Br str E Monarch, London, 1,000 bbls
Nor bk Dictator, Bordeaux, 3,700 bbls cde, 3,903 bbls nap
Sp str Habana, Havana, 25 cs

Aug 26

Am sch Frekerika Schepp, Caibarien, 200 cs
Br str Darial, Bremen, 1,215,000 gls
Br str Edith Hough, Trinidad, 600 cs
Br str Soldier Prince, San Juan RR, 200 cs
Br str Soldier Prince, Mayaguez, 200 cs
Br str Soldier Prince, Ponce, 800 cs
Br str Soldier Prince, Arecibo, 300 cs
Ger str Savona, Rio Janeiro, 500 cs
It bk David Penang f o, 28,900 cs
It bk Guilio E Clemenza, Cette, 2,350 bbls cde
Nor bk Prince George, Sligo, 3,087 bbls
Br sh Thomassina McClellan, Calcutta, 67,193 cs
It bk San Luigi, Exmouth, 2,724 bbls
Por bk Tentative, St Paul de Loanda, 2,000 cs

BOSTON

August 19

Sch North America, St John's, N F, 410 bbls

August 21

Bk Serrano, Buenos Ayres, 3,015 cs

August 22

Sch Ella Maud, Lockeport, 32 bbls

August 23

Sch Cyrene, Arichot, 140 bbls
Sch C C Warren, Port Mulgrave, etc, 120 bbls
Sch Eldridge Souther, Demerara, 500 cs

PHILADELPHIA

August 17

Ger str Elise Marie, Hamburg, 1,434,000 gls
Shp Emmanuel, Rotterdam, 9,103 bbls
Ger bk Moltke, Hamburg, 5,259 bbls

August 19

It bk Oliva Speciosa, Genoa, 21,382 cs

August 21

It bk Orsola, Lisbon, 2,750 bbls, 2,580 cs cde
Shp Asiana, St Loubes, 3,373 bbls cde, 4,000 bbls nap

August 23

Str Earnwell, St Jago, 200 bbls cde

BALTIMORE.

August 17

Br str Cearense, Para, 300 gls

SAN FRANCISCO

August 7

City of Papeete, Tahiti, 430 cs
City of Papeete, Marquesas, 50 cs

August 12

John Hancock, Eusenada, 4 cs

## Imports of Empty Petroleum Barrels.

NEW YORK.

550, S O Co, Miranda, Halifax
3,195, Fenaille & D, Artemus, Gothenburg
5,223, Fenaille & D, Tagal, Konisberg

CHARLESTON.

100, Street Bros, Samuel Ohlrich, Hamburg

## New Coloring Matters.

The number of new coloring matters placed on the market during the current year has been below the average, and yet the number of patents applied for in this branch of industry has shown no falling off. During the past month several new dyes have been offered to dyers, some of which seem to have properties which are of interest and value. Whether they have come to stop, time alone can prove.

Carbazol Yellow is a combination of tetra zocarbazol with two molecules of salicylic acid. It is a brownish powder, not very soluble in cold water. Sulphuric acid produces a violet precipitate soluble in excess to a dark blue solution; hydrochloric acid also produces a dark violet precipitate; caustic soda causes no change. It dyes cotton a yellow of a slight orange shade in the following bath:—5 per cent. coloring matter, 10 per cent. phosphate of soda, 3 per cent. soap, and 20 per cent. salt, boiling for one hour, then rinsing and drying The dyed cotton resists the action of washing and is fairly fast to light. Caustic alkalies turn it dark red.

Cotton yellow G is a similar dyestuff, giving a bright shade of yellow. It is a brownish-yellow powder, soluble in water, in which acids produce a dark brownish-red precipitate. It dissolves in sulphuric acid to a scarlet solution. Caustic alkalies have no action. It is dyed in the same way as carbazol yellow and has similar properties.

The next is a blue coloring matter of a very bright greenish-blue shade. It is made in three qualities, viz: patent blue, patent blue N, and patent blue B, the last being the reddest shade of the three. They are applicable for silk and wool dyeing. Silk is dyed in a bath of soap with a very little acid, as too much destroys the beauty of the shade. It must also be dyed boiling. Pale shades in silk have a fine greenish shade, while deep shades more nearly approach a pure blue than any other coloring matter. It dyes similar to indigo extract. On wool it is dyed in the usual way, but the dye-baths are not completely exhausted and can by fresh addition of coloring matter be used again. Pale shades have a greenish hue which is not so pronounced in the deep shades. The shades stand soaping very well indeed, although there is a slight loss of depth. In this respect, however, they are superior to those produced by any other blue, yielding similar shades. They can be combined with other acid colors to produce a variety of compound shades. Patent blue is sold in the form of a dark blue powder readily soluble in water to a fine azure blue solution. Very dilute acids change the color to green, strong acids turn it a brown yellow, and the blue color is not restored on diluting with water. Caustic soda has no action. On the fibre, strong acids change the color to brown yellow, dilute acids green it slightly, alkalies have no action.—*Dyer and Calico Printer.*


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## PETROLEUM MARKET.

TUESDAY EVENING, Aug. 27, 1889.

The week under review presented no features of a startling or specially interesting character. Trading has been dull throughout, and the range of prices between narrow limits. The market has not yet fully recovered from the last bear raid, although prices have ranged in the upper nineties, and have at times hovered close to the dollar mark. The apathy of operators has excited comment, but it appears less remarkable when the course of the market is taken into consideration. The conditions are now the same as they were before the recent break, and while the stocks are decreasing at the rate of over 25,000 bbls daily, outside investors cannot be expected to take hold of an article which is under the complete control of speculative operators, who depress the price in face of conditions which should insure its rapid and steady advance, The experience of the preceding week is frequently cited as a proof that outside operators would have their fleece completely shorn should they dare to become operators on the long side. Operations on the short side by those not immediately connected with one of the exchanges,under present conditions, is entirely out of the question. The reports from the producing fields have been used to depress prices, but while apparently bearish in tone these reports should have no weight, as the new developments have not shown a production sufficient to alter the previous relation of supply and demand. Those who study the situation closely appear more than ever sanguine that the growing strength of the statistical situation will soon assert its influence, and that when the upward movement once sets in in earnest the avdance will not be permanently checked short of $1 25. It is one thing to predict an advance and quite another to back up the opinion by purchases. At any rate the situation is interesting, and important developments are awaited. The transactions during the past week show a decrease from those of the previous week, the sales footing up 3,305,000 bbls against 5,065,000 bbls for the preceding week. The clearances of the local exchange amounted to 6,820,000 bbls, against 12,012,000 bbls during the preceding week. The total clearances reported for the other four exchanges amounted to 10,646,000 bbls against 15,858,000 bbls for the preceding week. The highest price of the week was reached on Thursday, when 100c was touched. The lowest point of the week was 96¾c, and was touched on Saturday. The opening price last Wednesday was 99c, and the close this evening was at 97⅝c, showing a loss of 1⅝c as the result of the week's trading, while the extreme range of fluctuations for the week was 3⅛c.

In the Butter field the trio of gushers at Jefferson Centre are holding up fairly well, The drill is the stimulant, however, and when it subsides the output is materially decreased. The following is the latest gauge: Christie, 38 bbls an hour; Finegan, 18 bbls an hour. Campbell & Murphy's No. 4, one location east of their No. 1, came in sooner than was expected and is dry. Leidecker & Burchfield, just below the old mill, have their tools fast, caused by broken jars.

Around Brush Creek Hite & Brennan No. 4, Sam Bonner farm, struck sand and started flowing. It is good for 60 bbls per day. Clerac Oil Company No. 5, Walters farm, struck sand and is showing for a 50 to 75 bbl well. J. G. Jennings & Co. No. 8, Bauerlein, struck sand and some oil. United Oil & Gas Trust's No. 3, George Neely farm, is drilling in the sand and has got some oil, but is showing very light.

In the Southwest field Murphy Bros.' White No. 5 was in top of the sand and showing good. Aiken, Gilbert & Hagerty were eight feet in the sand and flowing by heads at 50 barrels per day rate. Jennings' Ashbrook well is doing 125 bbls a day. Gladden No. 2, Cannonsburg, was down to 10 bbls an hour. Fergus McQuay No. 2 is on top of the Gantz sand. Swendly Bros., Oiler lot, was flowing by heads at a 7 bbl per hour rate.

Assistant State Geologist Carll makes the following report from a survey of the Pennsylvania oil fields: As to the various oil fields, the production is steadily decreasing. The great Alleghany (N. Y.) field has fallen off in two years from 5,176 to 3,300 barrels per day; the Bradford (McKean county) field, from 22,422 to 17,350, the Kane and Elk district, from 5,702 to 935; the Warren and Forrest district (Cherry Grove, Cooper, Balltown), from 7,999 in 1883 to 680 in 1888. In the comparatively new Washington and Shannopin district the average daily runs, in 1886, were 11,872 barrels, and, in 1888, 7,872 barrels. In the last two years 445 wells were sunk in this district, nearly one-third of them (137) being dry holes. The still newer Mt. Morris oil and gas field, on the West Virginia State line, discovered in 1886, has proved to be very promising, yielding much from the old Butler first sand, which is 50 feet thick in the Butler oil region, but is here swelled to 300 feet, and called the "Big Injun."

To take in all the fields the following short table will show the decrease in the annual production:

| | |
|---|---|
| 1886 | 25,060,460 |
| 1887 (in spite of 1,694 new wells) | 21,286,560 |
| 1888 (in spite of 1,530 new wells) | 16,126,580 |

In spite of the work of the drill no new important fields are being found, although every piece of territory with the least chance of having oil or gas is punctured.

*Wednesday, August 21.*

The market opened a trifle weak this morning at 99c, but there being a few buyers gathered about the ring, the price was soon run up to 99⅝c, which was the highest of the day, when offers to sell brought about a sharp reaction, and as the price receded others seemed anxious to unload. The market for a few moments had a panicky appearance, and all seemed desirous of selling, but the figures did not go below 98½c, at which there was buying support, and the break checked for the day. All this occurred during the first twenty minutes' trading. During the remainder of the day there was very little of interest, trading being very light and the variations in price of small extent. The close was at 98¾c, making a loss for the day of ¼c, while the range to fluctuations was ⅞c. August oil closed at 98½c. The sales amounted to 384,000 bbls. Reports from Butler stated that gauges of the Jefferson Center gusher made its production 55 bbls. Finegan, Starr & Co. No. 1, on the Logan farm, is a failure. The location is 55° north and 160 feet west of the gusher. Jefferson Oil Co.'s No. 1, on the Montag farm, 400 feet south of Campbell and Murphy's No. 1, the original gusher, is 5 bits in the sand and no oil. There is a show for a pay streak at a lower depth in the sand. Finegan, Starr & Co. No. 2, and Miller, Yeakle & Co. No. 1, expected to get the sand to-night. The latter well is 50 feet east of the Christie, and the former is 250 north of the same. The following is from the hundred-foot: Steele No. 1, on the Bolton, is in the sand, and has some oil. White & Campbell, on the Behm farm, above the Marshall farm house, is in and filled with oil. Frederick, on the Buhl farm, is doing 15 bbls per day. At Mt. Morris, the Aiken & Smith well, Price farm, is 140 feet in the sand and done drilling. They will tube the well. She is now doing 25 bbls a day. Hukell's Miller well is to top of the pay streak and showing some oil. It has very strong gas. They are not to lower pay streak yet. Hukill's Morford farm well is through the first pay streak and has some oil, with very strong gas. All three of the above wells are located a little east of the 22-degree line, predicted on the theory that the Dolls Run well was a west edge well, but the above three wells are all strong gassers, indicating that they are on the edge of the gas belt.

The half-hourly quotations were as follows:

| A.M. | | P.M. | |
|---|---|---|---|
| 10:00 | 99 | 12:30 | 98⅞ |
| 10:30 | 98⅞ | 1:00 | 98⅞ |
| 11:00 | 98¾ | 1:30 | 99⅛ |
| 11:30 | 99 | 2:00 | 99 |
| 12:00 | 98⅝ | 2:30 | 98⅞ |
| | | 3:00 | 98⅞ |

The clearances were as follows: New York, 1,456,000; Oil City, 1,014,000; Pittsburg, 262,000, Bradford, 452,000; Philadelphia, 48,000; total clearances Aug. 21, 3,232,000 bbls.

Carrying rates were: New York, 25c; (renewals 25c); Oil City, 35@40c; Pittsburg, 25@30c; Bradford, 25@30c.

Market Aug. 21. 1888—86½@88⅞c.

*Thursday, August 22.*

There was a little better feeling noticeable this morning, notwithstanding that reports had been received of the incoming of several wells which proved good producers. The opening price was 98⅞c and strong, but as there appeared to be a few desiring to unload the price was crowded down a point at a time until 98¼c was reached, which proved bottom. As no one could be induced to accept less and very little could be secured at this figure those seeking oil did not hold back their bids and as the market felt the effect of the change the price advanced steadily and bidding was thereby stimulated, the advance being checked only when the coveted dollar mark was reached. Beyond this the operators refused to go. During this advance trading was active but fell off as the highest point was reached shortly before noon, and for the remainder of the day was fitful and irregular, while prices continued rather weak. Late in the day the tone weakened further and the market closed at the opening price, the variations having been to the extent 1¼c. August oil was quoted at 98½c. The sales footed up 945,000 bbls. The reports from Butler were to the effect that the Finegan Starr & Black No. 2, on the Frank Fruit farm just 400 feet north and a little east of the Christie geyser, got the pay streak when five bits in the sand and the well flowed at a good gait, making close to 100 bbls the first hour. The succeeding hours showed some decline, and a late gauge made the output 45 bbls per hour. The Christie & Gounking was drilled for one hour and a half, and increased to 100 bbls per hour. The last gauge showed it to be doing 75 bbls per hour. The Jefferson Oil Company's No 1, on the Montag farm, 400 feet south of Campbell & Murphy's No. 1, is dry. Kifer & Co.'s No. 2 well, a few feet north of Campbell's well, has the hole plugged, necessitating them moving the rig and drilling another hole. In the southwest field Porters Harper lot well is doing 35 bbls per day. The Harshman well is through the sand and makes 200 bbls a day. Gladden's two wells drilled one bit deeper in the sand, and started at a rate of 40 bbls for the first hour. Potter & Co., Harper lot, is through the sand and doing 35 bbls a day. The McKennan lot well is in the Hickory sand, with no oil or gas in it yet. The Union Oil Company's Harshman No. 1, is doing 200 bbls a day. Gladden No. 3, Canonsburg, drilled one bit and did 40 bbls the first hour. Watson Roberts and McKay struck a gusher on the Flats, below the old Drake well, near Titusville. It is a natural producer and it is believed will do over 100 bbls the first 24 hours.

The half-hourly quotations were as follows:

| A.M. | | P.M. | |
|---|---|---|---|
| 10:00 | 98⅞ | 12:30 | 99⅛ |
| 10:30 | 98⅞ | 1:00 | 99⅜ |
| 11:00 | 99 | 1:30 | 99¼ |
| 11:30 | 99¾ | 2:00 | 99⅛ |
| 12:00 | 99⅝ | 2:30 | 99¼ |
| | | 3:00 | 98⅞ |

The clearances were as follows: New York, 812,000; Oil City, 494,000; Pittsbnrg, 334,000; Bradford, 378,000; Philadelphia, 40,000; total clearances Aug. 22, 2,058,000 bbls.

Carrying rates were: New York, 25c; (renewals 25c); Oil City, 30@35c; Pittsburg,25@30c; Bradford, 25@30c.

Market Aug. 22, 1888—8 ⅝@87⅛c.

*Friday, August 23.*

The opening this morning was at 98⅜c, showing a decline of ¼c from the close of last evening, and there being some desire to secure oil, the figures were advanced only to recede when the bidding eased off. During the noon hour the market again stiffened under fair trading, and the price was brought up to 99¼c. There was little trading in the afternoon, but there was sufficient interest shown to prevent a break, for which some of the bear interest was manœuvering. Late in the day free offerings to sell brought the figures down to 98¾c the lowest reached, and the market continued weak to the close, which was at 98½c. This made a loss for the day of ⅛c, under a range to quotations of 1c. The sales footed up 529,000 bbls., including 5,000 bbls. cash. August oil closed at 98½c. The news from the field was to the effect that the Yeakle & Co. well, 80 feet east of the Christie, found the pay streak this morning while running the third bit. Up to dark the well averaged 28 bbls. per hour. The well gassed very strongly, and a drilling well near by made it exceedingly dangerous to stir it up any more. The Finegan, Starr & Black, which made the largest showing for the first hour, this morning was flowing every twenty minutes, and this evening the intervals had been lengthened out to thirty-five minutes. It averages up about 30 barrels per hour. The well near Frazier's mill, on the Southwest corner of the Saxonburg field, that attracted considerable attention some time ago,was started to pumping this morning. The pumper reported that it had flowed six inches after pumping a short time, and had been making about two inches per hour. Four rigs had been completed near the well.

The half-hourly quotations were as follows:

| A. M. | | A. M. | |
|---|---|---|---|
| 10:00 | 98⅝ | 12:30 | 98⅞ |
| 10:30 | 99 | 1:00 | 99⅛ |
| 11:00 | 98⅝ | 1:30 | 99⅛ |
| 11:30 | 98¾ | 2:00 | 99 |
| 12:00 | 98¾ | 2:30 | 99 |
| | | 3:00 | 98½ |

The clearances were as follows: New York 1,252,000; Oil City, 952,000; Pittsburg, 552,000; Bradford, 532,000; Philadelphia, 56,000; total clearances August 23, 3,346,000 bbls.

Carrying rates were: New York, 25c; (renewals, 25c): Oil City, 35@40c; Pittsburg 25@30c; Bradford, 25@30c.

Market Aug. 23. 1888—86½@87¾c.

*Saturday, August 24.*

While the bids did not meet with prompt responses, there was an unsettled feeling, which some interpreted as indicating a change, while others regarded it as due merely to a disinclination to operate at the close of the week. Very little was done, and the time dragged wearily along until shortly before noon, when trading became active, with the bear element in the ascendancy. The market opened at 98⅜c, and a few sales brought the figures up to 98⅝c, from which there was little variation until the selling began, when trading became lively, a few buying down and helping the break through others when a halt seemed to threaten a reaction. During a very short time the market was forced down to 96¾c, and the close was at 96⅞c, making a loss for the day of 1½c, under a range of 1⅞c. Beyond rumors and reports from the West, to the effect that the new wells were adding largely to the production, there was no news of importance. The sales amounted to 443,000 bbls. August oil was quoted 98½c. The Gringo situation was outlined. The Raccoon Oil Co.'s No. 2, Potts farm, is through the sand and good for about 30 bbls per day natural. Their No. 2, on the S. Beagle farm, is down about 700 feet. Their No. 2, on the S. Wallace farm, is down about 350 feet. P. M. Shannon No. 6, Purdy farm, is down 1,300 feet. They have a rig completed for their No. 5, on the Purdy farm, and are drilling. Drake & Peter's No. 1, on the Wallace farm, is down about 2,300 feet, and has a fishing job for a string of tools. Painter & Bros. have moved their rig from the Purdy farm to the Ferguson farm, and are rigging up. Kelly Bros. & Cooper have a rig completed for their No. 1, on the Ferguson farm. J. Amm and D. Agan are building a rig for their No. 1, on the Kennedy farm. Hope-well Company No. 4, James Harper farm, is in the red rock. Their No. 2, on the Robert McCartney farm, is down 1,000 feet.

The half-hourly quotations were as follows:

| A.M. | | P.M. | |
|---|---|---|---|
| 10:00 | 98⅝ | 11:30 | 98⅝ |
| 10:30 | 98⅝ | 12:00 | 98⅞ |
| 11:00 | 98⅛ | | |

The clearances were as follows: New York, 1,200,000; Oil City, 728,000; Pittsburg, 200,000 Bradford, 460,000; Philadelphia, 000,000; total clearances Aug. 24, 2,588,000 bbls.

Carrying rates were: New York, 25c; (renewals, 25c); Oil City, 35@40c: Pittsburg, 25@30c: Bradford, 25@30c.

Market Aug. 24, 1888—87¼@87⅜c.

*Monday, August 26.*

A gain of ⅝c was scored over the closing price of Saturday at the opening this morning, the first sale being effected at 97¼c, but the feeling was weak and there were few buyers above 97c. Owing to lack of support the market gradually weakened, bringing the figures down to 96⅜c, when the trading improved, but the upward movement was slow and met with frequent checks. Shortly after noon, however, buying orders were received and the price steadily advanced until 98c was reached, which was the highest point of the day. From this there was no reaction and the market closed strong at 97⅞c, showing a gain for the day of ⅝c under a range to quotations of 1⅝c. The sales footed up 479,000 bbls. Beyond the efforts of the operators to affect changes there were no features of interest. Little news was received from the producing region. At Mt. Morris Hukill's Morford well was flowing by heads at a rate of 8 bbls per hour. Butchers Oil Co., Richards farm, southwest of their old well, was about 600 seet, and doing 12 bbls per hour in the Fourth sand—same as the Gold sand level. The Daugherty & Co. well on Black farm, Emlenton, made 37 bbls the first 24 hours. The Perrine, Daniels & Co. well No. 2, on McDowell, finished drilling and the show is as good as the Daugherty.

The half-hourly quotations were as follows:

| A.M. | | P.M. | |
|---|---|---|---|
| 10.00 | 97¼ | 12.30 | 97 |
| 10:30 | 97⅛ | 1:00 | 97⅛ |
| 11:00 | 97 | 1:30 | 97⅜ |
| 11:30 | 97⅛ | 2:00 | 97¾ |
| 12:00 | 97⅛ | 2:30 | 97¾ |
| | | 3:00 | 97⅜ |

The clearances were as follows: New York, 1,220,000; Oil City, 846,000; Pittsburg, 758,000; Bradford, 560,000; Philadelphia, 56,000; total clearances Aug. 26, 3,440,000 bbls.

Carrying rates were: New York, 25c; (renewals, 25c); Oil City, 35@40c; Pittsburg, 25@30c; Bradford, 25@30c.

Market Aug. 25, 1888—86⅞@89⅞c.

*Tuesday, August 27.*

The market opened a little stronger this morning at 98c and under moderate trading the price advanced to 98½c, but this was the highest reached, buyers refusing to go beyond that figure. Whenever a dealer signified his willingness to accept less his offer found takers and consequently the market remained pretty steady during the forenoon although trading was rather quiet. During the noon hour there were freer offerings to sell of which advantage was takent to depress values and the figures were sent down to 97¼c. While this again brought buyers to the front there was no decided reaction and the succeeding fluctuations showed that a weaker feeling prevailed, The market closed dull and weak at 97⅝c, making a loss for the day of ⅝c under a range to quotations of 1¼c. The sales reached a total of 525,000 bbls. including several transactions in "to-morrow" oil. There were no features of interest to note and the reports from the producing fields were meager and showed no important change in the situation.

The half-hourly quotations were as follows:

| A. M. | | P. M. | |
|---|---|---|---|
| 10:00 | 98 | 12:30 | 98¼ |
| 10:30 | 68¼ | 1:00 | 97⅛ |
| 11:00 | 98¼ | 1:30 | 97¾ |
| 11:30 | 98⅛ | 2:00 | 97⅝ |
| 12:00 | 98⅜ | 2:30 | 97⅝ |
| | | 3:00 | 97⅜ |

The clearances were as follows: New York, 876,000; Oil City, 638,000; Pittsburg, 724,000; Bradford, 482,000; Philadelphia, 80,000; total clearances August 27, 2,800,000 bbls.

Carrying rates were: New York, 25c (renewals, 25c); Oil City, 30@35c; Pittsburg, 25@30c; Bradford, 25c.

Market August 27, 1888—89¾@91¼c.

The amount of daily sales and total for the week follow:

| Date. | Bbls. |
|---|---|
| Aug. 21 | 384,000 |
| " 22 | 945,000 |
| " 23 | 529,000 |
| " 24 | 443,000 |
| " 26 | 479,000 |
| " 27 | 525,000 |
| Total for the weed | 3,305,000 |

Following is given the opening, highest, lowest and closing figures for each day, in tabulated form for comparison:

| | Opening. | Highest. | Lowest. | Closing. |
|---|---|---|---|---|
| Aug. 21 | 99 | 99⅝ | 98⅜ | 98¾ |
| " 22 | 98⅞ | 1 00 | 98⅛ | 98⅛ |
| " 23 | 98⅝ | 99¼ | 98¼ | 98¼ |
| " 24 | 98⅜ | 98⅝ | 98¾ | 98¾ |
| " 26 | 97¼ | 98 | 98⅛ | 97¾ |
| " 27 | 98 | 98¼ | 97¼ | 97⅜ |

The total clearances during the week at the several petroleum exchanges foot up as follows:

| | | |
|---|---|---|
| New York | | 6,820,000 |
| Oil City | | 4,672,000 |
| Pittsburg | | 2,830,000 |
| Bradford | | 2,564,000 |
| Philadelphia | 280,000 | |
| | | 10,646,000 |
| Total | | 17,466,000 |

The demand for refined for export has been moderately active, the slight variations in the speculative market for crude certificates doubtless tending to confirm the belief that there was very little likelihood that prices for refined would go lower. Shippers have placed orders freely to supply the current demand, and have made engagements for all the oil for which they could find transportation at favorable freight rates. The sales for the week foot up 150,000 bbls, over two-thirds of which will be shipped in tank steamers. The price of 70° Abel test has remained steady at 7·20c for New York and Philadelphia loading and 7·15c for Baltimore loading. The principal foreign markets are easier. To-day's quotations by cable were: Antwerp, 17¾@17¾f; Bremen, 7 15m; London, 5⅞@6d, and Liverpool, 6@6¼d. Freight rates are a little easier, and the rate to London may now be quoted 3s@3s 3d. To Continental ports the range is 3s 3d@4s 6d as to port and vessel. Home trade lots have been in somewhat better request and continue steady. We quote 9¼@9¼c for State legal test, 8¼@8½c for 110 test, 8¾@9c for New York 100° flash, and 10¼@10¼ for 150° water white. Western lots are offered at the same figures.

Cases for export have continued in good request and sales of over 1°5,000 are reported. The price for plain tops has remained steady at 9·20c. Freight rates are firm. The nominal rates for large vessels are: For Java, 35@36c; Japan, 35@36c; Calcutta, 25@26c; Bombay, 29@30c; Rangoon, 31@32c; Singapore, 33@34c; Hong Kong, 35@36c; and for Shanghae, 39@40c.

Crude in barrels for export has been in fair request, and sales of 30,000 bbls are reported. The price is steady at 7·00c. Cases for export have been neglected and no sales are reported. The price is steady at 9·60c.

Prime city naphtha continues unchanged at 7½c. For export there has been no demand, and no sales are reported.

Western residuum is quoted at 2¼@2½c f o b. Barrels are quoted at 5¼@5½c. No sales are reported for export. Lima residuum is quoted at 5@5¼c in barrels.

## Closing Quotations.

CRUDE.

| | |
|---|---|
| National Transit Certificates ₱ bbl. | 97⅝@97¾ |
| In bbls ₱ gal. | 7·60 |
| In cases | 9·60 |
| Residuum, bbls, for export 18@22°. | 5¼@5¾ |
| for domestic use f o b | 2¼@2¼ |

REFINED, IN BARRELS.

| | |
|---|---|
| Cargo lots, Abel test ₱ gal. | 7·20 |
| Philadelphia loading | 7 20 |
| Baltimore loading | 7·15 |
| 50 bbl lots, f. o. b. or on dock | 8⅛@8¼ |
| 10 bbl lots, f. o. b. or on dock | 8⅜@½ |

HIGH TEST OILS—JOBBING LOTS.

| | |
|---|---|
| 110 fire test, S. W ₱ gal. | 8½@8¼ |
| 120 fire test, S. W | 8¾@8½ |
| 130 fire test, S. W | 9 @ — |
| State test | 9½@ — |
| 150 fire test, W.W | 10¾@10¾ |
| 300 fire test | 10½@11¼ |
| New York city, 100 flash | 8¾@9 |

REFINED IN CASES, 110 FIRE TEST.

| | |
|---|---|
| Two-five, low screw, 10,000 lots | 9 20@— |
| 5,000 to 10,000 | 9⅝@9⅝ |
| 1,000 to 5,000 | 9½@9⅝ |
| 200 to 1,000 | 9⅝@9⅞ |
| Under 200 | 10 @10⅛ |

NAPHTHA AND GASOLINE.

| | |
|---|---|
| Naphtha, crude, cargo lots, 68@72 deg | 7·87½ |
| Naphtha, crude, car lots, 68@72 deg | 7¾@8 |
| Naphtha, crude, 70 deg | 8¾@9¾ |
| Sweet, 62 deg | 8¾@9¾ |
| 70 deg | 9¼@10¼ |
| 76 deg | 9¾@10¾ |
| Gasoline, 86 deg | 13 @14 |
| 88 deg | 15 @16 |
| 0 deg | 18 @19 |

EMPTY PETROLEUM BARRELS.

| | |
|---|---|
| Cargoes, spot | $1 05 @1 06 |
| omestics, on dock | 1 02½@1 05 |
| ubject to inspection | 1 05 @ - |

## Petroleum Statistics.

RUNS—TOTAL AND AVERAGE.

| | Day. | Total. | Av'ge |
|---|---|---|---|
| Mon. Aug. 19 | 66,705 | 918,649 | 48,350 |
| Tues. " 20 | 63,155 | 981,804 | 49,090 |
| Wed. " 21 | 54,727 | 1,036,531 | 49,359 |
| Thurs. " 22 | 61,351 | 1,097,882 | 49,904 |
| rid. " 23 | 49,947 | 1,147,829 | 49,905 |
| at. Sun. 24 & 25 | 77,255 | 1,225,084 | 49,003 |
| | | 1888. | 1889. |
| anuary | | 1,048,641 | 1,526,161 |
| February | | 1,175,102 | 1,318,800 |
| March | | 1,193,133 | 1,622,230 |
| April | | 1,200,977 | 1,643,610 |
| May | | 1,301,015 | 1,809,098 |
| June | | 1,289,616 | 1,817,320 |
| July | | 1,260,486 | 1,956,534 |
| August | | 1,285,558 | .... |
| September | | 1,181,482 | .... |
| October | | 1,235,040 | .... |
| November | | 1,335,596 | .... |
| December | | 1,443,558 | .... |
| Year | | 14,950,204 | ... |

DELIVERIES—TOTAL AND AVERAGE.

| | Day. | Total. | Av'ge |
|---|---|---|---|
| Mon. Aug. 19 | 109,960 | 1,472,153 | 77,482 |
| Tues. " 20 | 96,162 | 1,561,315 | 78,416 |
| Wed. " 21 | 64,366 | 1,632,681 | 77,747 |
| Thurs. " 22 | 87,551 | 1,720,232 | 78,192 |
| Frid. " 23 | 87,485 | 1,807,72A | 78,596 |
| Sat. Sun. 24 & 25 | 128,162 | 1,933,883 | 77,435 |
| | | 1888. | 1889. |
| January | | 2,225,975 | 2,354,570 |
| February | | 2,115,803 | 2,286,812 |
| March | | 1,980,963 | 2,283,645 |
| April | | 1,830,523 | 2,242,546 |
| May | | 1,676,794 | 2,257,175 |
| June | | 1,677,330 | 2,276,304 |
| July | | 1,933,873 | 2,628,065 |
| August | | 2,105,343 | .... |
| September | | 2,210,876 | .... |
| October | | 2,505,653 | .... |
| November | | 2,434,863 | .... |
| December | | 2,276,495 | .... |
| Year | | 24,974,390 | .... |

CHARTERS—TOTAL AND AVERAGE.

| | Day. | Total. | Av'ge. |
|---|---|---|---|
| Mon. Aug. 19 | 60,476 | 885,113 | 46,585 |
| Tues. " 20 | 41,209 | 926,382 | 46,319 |
| Wed. " 21 | 4,444 | 930,826 | 44,325 |
| Thurs. " 22 | 51,111 | 981,937 | 44,684 |
| Frid. " 23 | 40,912 | 1,022,849 | 44,471 |
| Sat. Sun. 24 & 25 | 83,651 | 1,106,500 | 44,260 |
| | | 1888. | 1889. |
| January | | 914,199 | 1,399,557 |
| February | | 1,199,169 | 1,120,226 |
| March | | 998,923 | 1,270,863 |
| April | | 973,208 | 874,773 |
| May | | 1,257 607 | 1,433,764 |
| June | | 1,219,188 | 1,256,666 |
| July | | 1,339,147 | 1,892,547 |
| August | | 1,221,935 | .... |
| September | | 1,487,452 | .... |
| October | | 1,505,673 | .... |
| November | | 847,693 | .... |
| December | | 959,752 | .... |
| Year | | 13,923,946 | .... |

CHARTERS FOR THE WEEK.

The total charters for refined in barrels and cases, crude in barrels and cases, naphtha, &c., during the week ending August 24, were as follows:

| | |
|---|---|
| Refined, bbls | 144,500 |
| Refined, cs | 177,000 |
| Crude, bbls | 31,800 |
| Crude, cs | |
| Naphtha, bbls | |
| Residuum, bbls | |
| Lubricating, bbls | |
| Total, crude equivalent | 318,014 |

CLEARANCES FOR THE WEEK.

During the week ending August 24, the clearances of petroleum, in gallons, from the port of New York were as follows:

| | |
|---|---|
| Refined | 9,566,259 |
| Crude | 1,415,952 |
| Naphtha | 342,288 |
| Residuum | |
| Total | 11,324,499 |

EXPORT STATISTICS.

The following table shows the total exports from the port of New York and from the United States, reduced to crude equivalent, in gallons, for the week ending Aug. 17; also the total shipments to date, with comparisons with 1888:

| | |
|---|---|
| Exports from New York for week ending Aug. 17 | 11,044,424 |
| Total exports from New York from Jan. 1, 1889 | 345,509,648 |
| Same period last year | 271,520,160 |
| Increase | 73,989,488 |
| Exports from U. S. for week ending Aug. 17, | 11,560,919 |
| Total exports from U. S. from Jan. 1, 1889 | 439,694,954 |
| Same period last year | 370,818,793 |
| Increase | 68,876,161 |

TOTAL EXPORTS FROM DIFFERENT PORTS.

| | 1889. | 1888. |
|---|---|---|
| New York | 345,509,648 | 271,520,160 |
| Philadelphia | 84,982,205 | 92,233,923 |
| Baltimore | 1,235,367 | 3,536,067 |
| Boston | 2,778,339 | 1,795,603 |
| Perth Amboy | ..... | 1,733,533 |
| San Francisco | 180,062 | 19,507 |
| New Orleans | 9,333 | ..... |
| Grand total | 439,694,954 | 370,818,793 |

CAPACITY OF VESSELS LOADING.

The following table gives the capacity of the vessels loading petroleum at the ports of New York, Philadelphia, Baltimore and Boston on August 24:

| | NEW YORK. | | PHILADELPHIA. | |
|---|---|---|---|---|
| | Bbls. | Cases. | Bbls. | Cases. |
| Refined | 303,000 | 1,117,000 | 74,400 | 551,000 |
| Crude | 74,400 | 48,000 | 15,500 | 30,000 |
| Naphtha | 5,500 | .... | .... | .... |
| Total | 382,900 | 1,165,000 | 89,900 | 581,000 |
| | BALTIMORE. | | BOSTON. | |
| | Bbls. | Cases. | Bbls. | Cases. |
| Refined | 3,000 | .... | .... | .... |
| Crude | .... | .... | .... | .... |
| Naphtha | .... | .... | .... | .... |
| Total | 3,000 | .... | .... | .... |

## Foreign Statistics.

REFINED QUOTATIONS.

| | Antwerp. | Bremen. | London |
|---|---|---|---|
| Wed. Aug. 21 | 17¾@— | 7.15 | 5¾@6⅛ |
| Thur. " 22 | — @17¾ | 7.05 | 5¾@6⅛ |
| Fri. " 23 | 17¾@— | 7.05 | 5¾@6⅛ |

## Exports of Petroleum from New York

### REFINED.

| COUNTRIES. | Week Ending Aug 20. Gals. | Jan. 1 to Aug. 19, 1889. Gals. | Jan. 1 to Aug. 20, 1888. Gals. |
|---|---|---|---|
| Africa, Liberia | | 6,150 | 25,653 |
| Sierre Leone | | 10,000 | 50 |
| South Africa | 114,450 | 1,507,960 | 839,855 |
| Zanzibar | | 430,000 | 353,500 |
| Algiers | | 946,200 | 1,197,140 |
| Arabia | | 460,000 | 190,000 |
| Argentine Republic | | 5,251,110 | 1,982,953 |
| Australia | 120,000 | 2,222,987 | 5,753,035 |
| Austria | | | 14,155 |
| Belgium | 634,050 | 15,414,668 | 18,706,002 |
| Brazil | 135,000 | 5,693,054 | 5,763,192 |
| British East Indies, Aden | | 383,840 | 445,000 |
| Burmah | | 4,316,030 | 1,992,980 |
| India | 671,930 | 24,434,331 | 17,162,840 |
| Penang | 289,000 | 1,260,795 | 630,000 |
| Singapore | | 2,344,295 | 1,296,440 |
| British Guiana | 5,000 | 321,980 | 200,049 |
| British West Indies, Antigua | | 27,236 | 29,250 |
| Barbadoes | | 168,675 | 241,956 |
| Basse Terre | | 36,020 | 41,220 |
| Bermuda | 1,381 | 60,199 | 78,385 |
| Domenica | | 13,250 | 7,620 |
| Jamaica | 1,900 | 356,211 | 412,267 |
| Montserrat | | 4,022 | 3,450 |
| Nassau | | 48,684 | 42,734 |
| St. Lucia | | 11,478 | 22,686 |
| St. Vincent | | 15,200 | 19,945 |
| Trinidad | 6,000 | 161,925 | 181,260 |
| All others | | 131,478 | 56,905 |
| Canary Islands | | 339,012 | 69,750 |
| Central America, Belize | 5,900 | 51,570 | 39,086 |
| Costa Rica | | 15,863 | 61,072 |
| Guatamala | 200 | 38,751 | 44,478 |
| Honduras | 250 | 22,935 | 18,110 |
| Nicaraugua | 19,400 | 95,154 | 110,756 |
| San Salvador | | 38,030 | 44,770 |
| Chili | 45,000 | 702,176 | 2,363,000 |
| China, Cochin | | 16,893,330 | 2,396,750 |
| All other | | | 9,368,850 |
| Cuba | 3,400 | 879,505 | 432,442 |
| Danish West Indies | 300 | 49,467 | 32,374 |
| Denmark | 388,992 | 2,466,239 | 2,998,200 |
| Dutch East Indies, Java | 627,000 | 18,088,680 | 11,618,532 |
| Macassar | | 522,250 | 73,140 |
| Sumatra | 520,000 | | 325,000 |
| Dutch West Indies | 1,605 | 70,128 | 70,737 |
| Dutch Guiana | | 38,703 | 94,581 |
| Ecuador | | 67,000 | 93,150 |
| England | 1,991,831 | 27,017,784 | 24,945,600 |
| Egypt | | 2,235 320 | 498,150 |
| France | | 2,871,044 | 721,256 |
| French Guiana | | 21,000 | 17,100 |
| French West Indies | 2,000 | 2,608,383 | 278,827 |
| Germany | 3,403,820 | 57,202,600 | 54,744,900 |
| Gibraltar | | 873,980 | 327,000 |
| Greece | | | |
| Hawaiian Islands | | 50,000 | 100,000 |
| Hayti | 200 | 323,220 | 243,630 |
| Ireland | 158,700 | 3,161,281 | 1,718,657 |
| Italy | | 4,617,203 | 627,987 |
| Japan | | 11,263,650 | 6,381,610 |
| Mexico | | 381,355 | 56,001 |
| Malta | | | 120,880 |
| Mauritius Island | | | 14,750 |
| Netherlands | | 21,564,570 | 13,753,923 |
| New Zealand | | 391,284 | |
| North America, New Brunswick | 25,356 | 373,743 | 364,135 |
| New Foundland | | 73,755 | 163,228 |
| Nova Scotia | | 192,000 | 93,181 |
| Prince Ed. Island | | | 55,000 |
| Norway and Sweden | 95,108 | 4,815,764 | 4,585,366 |
| Peru | 120 | 422,023 | 210,829 |
| Porto Rico | 15,200 | 488,240 | 454,945 |
| Phillippine Islands | | 1,395,000 | 317,000 |
| Portugal | 153,100 | 249,071 | 700,648 |
| Reunion | | 177,000 | 74,500 |
| Russia | | 119,690 | |
| Scotland | | 300 | 145,820 |
| Siam | | 325,000 | 857,050 |
| Spain | | 429,970 | 175,700 |
| Tasmania | | 64,200 | |
| Turkey | | | 435,764 |
| U. S. of Col | 1,120 | 727,962 | 453,289 |
| Uruguay | 100,000 | 2,316,040 | 900,790 |
| Venezuela | 28,876 | 814,695 | 509,804 |
| Wales | | 418,238 | 143,766 |
| Total | 9,566,259 | 245,096,598 | 203,914,590 |

### CRUDE.

| COUNTRIES. | Week Ending Aug 20. Gals. | Jan. 1 to Aug. 19, 1889. Gals. | Jan. 1 to Aug. 20, 1888. Gals. |
|---|---|---|---|
| Argentine Republic | | | |
| Australia | | | |
| Austria | | 674,572 | |
| Belgium | | | |
| Brazil | | 918 | |
| British Guiana | | | |
| British North America | | | |
| British West Indies | | | 248 |
| Chili | | | |
| Central America | | 100 | |
| Cuba | 179,540 | 2,186,545 | 1,891,931 |
| Danish West Indies | | 1,095 | |
| Dutch West Indies | | | |
| England | | 8,085 | |
| France | 1,031,862 | 17,724,389 | 13,648,842 |
| Germany | | 3,525,166 | 1,230,503 |
| Hawaiian Islands | | | |
| Mexico | | 2,287,592 | 797,240 |
| Norway and Sweden | | 170,805 | 187,230 |
| Spain | 204,550 | 2,937,653 | 7,548,282 |
| Uruguay | | | |
| Venezuela | | 205 | |
| Total | 1,415,952 | 29,663,735 | 25,056,172 |

### NAPHTHA.

| COUNTRIES. | Week Ending Aug 20. Gals. | Jan. 1 to Aug. 19, 1889. Gals. | Jan. 1 to Aug. 20, 1888. Gals. |
|---|---|---|---|
| Africa | 4,750 | | |
| Algiers | | | |
| Argentine Republic | | 7,210 | 1,625 |
| Australia | | | 48 |
| Belgium | | 140,000 | 223,244 |
| Brazil | | 6,875 | 12,540 |
| British North America | | 522 | 1,800 |
| British West Indies | | 12 | |
| Central America | | | |
| Chili | | | 237 |
| Cuba | | 25,000 | |
| Denmark | | | |
| England | 139,827 | 2,597,747 | 1,923,208 |
| France | 201,226 | 2,463,007 | 1,394,063 |
| Germany | | 1,420,702 | 525,380 |
| Hayti | | | |
| Ireland | | | |
| Mexico | | 230 | |
| Norway and Sweden | | 526,680 | 348,573 |
| Portugal | 1,235 | | 4,850 |
| Russia | | 28,223 | |
| Turkey | | | |
| Uruguay | | 180 | |
| Venezuela | | | |
| Total | 342,288 | 7,322,324 | 4,450,848 |

| | | | | |
|---|---|---|---|---|
| Sat. | " | 24.....17¾@— | 7.05 | 5⅞@6⅛ |
| Mon. | " | 26 ....17⅛@17⅝ | 7.05 | 5⅞@6⅛ |
| Tues. | " | 27.....17⅜@17⅛ | 7.15 | 5⅞@6 |

STOCKS, RECEIPTS AND SHIPMENTS.

The statistical situation at the seven principal continental ports on Aug. 10, was:

| | 1889. | 1888. |
|---|---|---|
| Stock, Aug. 10 | 842,410 | 530,402 |
| Afloat " | 239,919 | 196,167 |
| Loading " | 189,250 | 134,550 |
| Total | 1,271,579 | 861,407 |
| Receipts Aug. 3 to Aug. 10 | 182,606 | 20,744 |
| Rc'ts Aug. 3 '89, to Aug. 10, '89. | 549,175 | 533,923 |
| Shipments Aug. 3 to Aug. 10 | 101,543 | 74,384 |
| Shp's Aug. 3,'89, to Aug. 10,'89 | 411,421 | 375,632 |

At London the statistical situation on the same date was made up as follows:

| | 1889. | 1888. |
|---|---|---|
| Stock, Aug. 10 | | |
| Afloat " | | |
| Loading " | | |
| Total | | |
| Receipts Aug. 3 to Aug. 10 | | |
| Rec's Aug. 3,'89, to Aug. 10,'89 | | |
| Shipments Aug. 3 to Aug. 10 | | |
| Shp'ts Aug. 3,'89, to Aug. 10,'89 | | |

## Petroleum Charters.

Following is a list of vessels chartered and loading or to load petroleum at New York Philadelphia, Baltimore and Boston:

| NEW YORK. | Bbls Re d |
|---|---|
| Feb 28 | |
| Br shp Andrina, Calcutta, pt.....cs | 90,000 |
| March 7 | |
| Br sh Orealia, Calcutta, pt.....cs | 70,000 |
| March 20 | |
| Br shp Glenfinlas, Calcutta, 23c.....cs | 70,000 |
| April 24 | |
| Br sh Palgrave, Calcutta, pt.....cs | 130,000 |
| May 8 | |
| Br sh Buckingham, Calcutta, 25c.....cs | 100,000 |
| May 10 | |
| Br sh Arlie, Rangoon, 32c, Calcutta 25c.cs | 60,000 |
| May 13 | |
| Am shp John A Briggs, Japan, 35c.....cs | 75,000 |
| May 18 | |
| Br sh Bay of Naples, Rangoon, 31c.....cs | 60,000 |
| May 21 | |
| Br shp Thomassina McClellan, Java, p t.cs | 70,000 |
| Br shp Crenshaw, Java, 34c, 35c, 36c....cs | 50,000 |
| May 22 | |
| Br shp Londa, Continent, 3s 1½d | 9,000 |
| May 23 | |
| Br shp Lord Templeton, Calcutta, 25c.cs | 80,000 |
| May 24 | |
| Nor bk Tordenskjold, Continent, p t | 8,000 |
| May 25 | |
| Br bk Albeura, Far East, p t.....cs | 25,000 |
| Ger shp Stassfurt, Hamburg, p t | 10,000 |
| Ger shp Leopoldschall, Hamburg, p t | 8,000 |
| May 31 | |
| Nor str Unita, Baltic, p t | 2,000 |
| June 4 | |
| Br shp British Empire, Calcutta, 25c...cs | 60,000 |
| June 5 | |
| Br str Darwin, Kurrachee, 30c.....cs | 65,000 |
| June 6 | |
| Am sh Iceberg, Hong Kong, 35c.....cs | 40,000 |
| June 11 | |
| Am sh Wm H Macy, Japan, 35½c.....cs | 80,000 |
| June 14 | |
| Nor bk Embla, Baltic, pt | 3,400 |
| June 15 | |
| Nor sh Josephine, U K or Cont, pt | 5,500 |
| June 17 | |
| Am sh Alex Lawrence, Madras, 27c...cs | 45,000 |
| June 19. | |
| Br shp Abbie S. Hart, Yokohama, 35½c cs | 55,000 |
| Br shp Kingsport, U. K, 3s 6d | 6,500 |
| June 21. | |
| Br bk Gulf Stream, Java, 33c, 34c, 35c..cs | 50,000 |
| June 22 | |
| Br shp Brambiety, Calcutta, p t.....cs | 60,000 |
| June 24 | |
| Br sh Falls of Halladale. Calcutta, 25c.cs | 80,000 |
| Br sh Joseph H Scammell, Shanghae, p t.....cs | 55,000 |
| June 25 | |
| Br str Mamari, London, 2s 8¼d | 11,500 |
| June 26 | |
| Br str Pataro, w c England or e c Ireland, 3s 4½d | 5,500 |
| Br shp Trimandra, Calcutta, 26c.....cs | 60,000 |
| June 27 | |
| Br shp Siren, Calcutta, 25c.....cs | 50,000 |
| Br shp Holyrood, Calcutta, 24½c.....cs | 80,000 |
| July 5 | |
| It bk Mici Nipote, Bankok, 38c.....cs | 30,000 |
| July 6 | |
| Ger bk Germania, Stettin, 4s 6d | 6,000 |
| July 11 | |
| It bk Adele, Montevideo, f o, 40½c.....cs | 16,000 |
| Ger sh Baltimore, Cont, pt | 7,500 |
| July 12 | |
| Aus bk Conte Oscar L, U K, 3s 6d | 6,000 |
| July 15 | |
| Ger sh Anna, Continent, pt | 8,000 |
| Am sh Pactolus, Shanghae, 40c.....cs | 40,000 |
| July 16 | |
| Br str Sophia, Venice, o's acc, tank | 11,000 |
| Br sh Canute, Marseilles, 3s 10½d | 10,000 |
| July 19 | |
| Am shp St John, Japan, 33c.....cs | 65,000 |
| July 20 | |
| Nor bk P M Petersen, Baltic, p t | 7,400 |
| Ger sh Auguste, U K, p t | 9,000 |
| July 22 | |
| Nor sh Kommander Svend Foyn, London 3s 1½d, or Antwerp 3s 4½d | 15,000 |
| July 23 | |
| Br str Monmouthshire, China and Japan, p t.....cs | |
| July 25 | |
| Belg shp Hainaut, Antwerp, o's acc, tank. | 15,000 |
| Br str Tansaville, French port, o's acc, tank .....cde | 20,000 |
| Nor str Stamford, U K 4s or Baltic 4s 6d. | 2,000 |
| Nor str Victoria, Baltic, p t | 2,500 |
| July 26 | |
| Br str Navarro, Liverpool, 2s 9d | 15,000 |
| Br str Ituni, U K, 3s 6d | 5,500 |
| Ger sh Susanne, Bremen or H'burg, pt | 9,000 |
| Nor bk Romona, Baltic, pt | 2,500 |
| July 27 | |
| Nor bk Faldin, Baltic, pt | 5,500 |
| July 29 | |
| Ger sh Helene, Continent, pt | 7,500 |
| Ger bk Victoria, Baltic, pt | 2,500 |
| July 30 | |
| Nor bk Ariadne, Baltic, pt | 5,000 |
| Br bk Lynnwood, London, 3s 3d.....lub | 9,000 |
| It bk La Mariccia, Pozzuoli, 4s | 3,500 |
| July 31 | |
| Nor bk Alsylva, Baltic, pt | 3,000 |
| Br bk Belvidere, Dublin, 2s 7½d | 4,800 |
| August 1. | |
| It bk Carmella Massa, Pozzuoli, 4s | 2,800 |
| Ger shp Louise & Auguste, Hamburg, 3s 3d | 7,000 |
| It bk Michele B, Alicante, 4s 7½.....cde | 1,500 |
| Aug 2 | |
| Ger bk Western Chief, Cont pt | 5,000 |
| Ger shp Deutschland, Hamburg, 3s 9d | 8,500 |
| Ger bk Hampton Court, Continent, pt | 6,500 |
| Ger shp Union, Hamburg, 3s 10½d | 7,000 |
| Nor shp Kommander Svend Foyne, Antwerp, 3s 3d | 14,000 |
| Dch str Brinio, Harlingen, 4s 3d | 2,000 |
| Aug. 3. | |
| Br shp Benavon, Calcutta, 25c.....cs | 60,000 |
| It bk Venere, Stockholm, 4s 9d.....nap | 2,500 |
| Aus bk Marguarita, Alexandria, 23c...cs | 24,000 |
| Aus bk Lincoln, St Louis du Rhone, 4s 2d.....cde | 5,000 |
| Aug. 5 | |
| Nor shp Persia, Antwerp, 3s 3¾d | 10,000 |
| Nor bk Ringhorn, U Kor Cont, pt | 6,000 |
| August 6 | |
| Br shp Blair Athole, Java, 33c.....cs | 60,000 |
| Nor bk ——, Copenhagen or Aarhus, 3s 10d | 6,000 |
| Br sh ——, Marseilles, 3s 10½d.....cde | 10,000 |
| August 7 | |
| Nor bk Mentor, Antwerp or Bremen, p t.....nap | 3,000 |
| August 8 | |
| Port bk Agnes, Bilboa, p t.....cs cde | 24,000 |
| August 9 | |
| Br bk Marquis of Lorne, Cardiff, 3s | 75,000 |
| Nor shp Hangesund, Bristol, 3s 3d.....cs | 6,500 |
| August 13 | |
| Sp str Gaditans, Liverpool, 3s 4½d | 9,000 |
| Br bk Nova Scotia, London, 3s 3d | 7,000 |
| Br bk Alice M Claridge, London, 3s 3d | 8,000 |
| Br bk Jas Stafford, London, 3s 3d | 7,200 |
| Br shp Tilhurst, Calcutta, p t.....cs | 58,000 |
| It bk Santa Anna E Maria, Cette, 4s 3d.cde | 2,500 |
| Aus bk Amor, Alexandria or Port Said, p t.....cs | 17,000 |
| Aug 14 | |
| It bk Carmela C, Oran, 21c.....cs | 21,000 |
| Ger bk Agnes, Continent, pt | 5,000 |
| Port bk Marie, Oporto, pt | 3,000 |
| Nor bk Alfarin, Sweden, 4s 4½d | 3,000 |
| It bk Immacolata, Marseilles, 4s.....cde | 5,500 |
| Br bk Talisman, Marseilles, 4s.....cde | 6,000 |
| Aug 15 | |
| Br bk Snow Queen, Continent, pt | 6,500 |
| Am sch Fred A Small, Passages, pt...cde | 3,800 |
| Aug 16 | |
| Br str Salerno, Dunkirk, 4s 3d.....cde | 6,000 |
| Ger bk Chas Luling, Hamburg, 3s 6d | 7,700 |
| Ger bk Auguste, London, 3s 3d | 9,400 |
| Aug 17 | |
| It bk Oreb, Alexandria, 22½c.....cs | 28,000 |
| Aug 19 | |
| Span bk Tafalla, Cette, 4s .....cde | 6,000 |
| Nor bk Embla, Baltic, 4s 9d | 3,000 |
| Aug 20 | |
| Swed bk Naomi, Baltic, p t | 4,400 |
| Br bk Emma Payzant, Limerick, 3s 9d | 5,100 |
| Nor bk Ilos, U K, p t | 4,500 |
| Aug 21 | |
| It bg Lemiccia, Oran, 22c.....cs | 14,000 |
| Aug 22 | |
| Nor bk Ariadne, Christiania, 4s 3d | 3,000 |
| Br sh Mary L Burrill, Havre, 3s 9d....cde | 9,600 |
| Aug 23 | |
| Br sh Thos Perry, Bordeaux, 4s.... cde | 7,200 |
| Br str President Garfield, Bombay, 32c cs | 65,000 |
| Br sh Morna, Bankok, 34c.....cs | 50,000 |
| Am sh Hamilton Fish, Marseilles, 4s..cde | 10,000 |
| Nor str Viking, U K or Baltic, 4s 9d | 2,500 |
| Aug 24 | |
| It brg Madawaska, Gibraltar f o, p t...cs | 16,000 |
| Br str Charlois, Dutch port, o's acc, tank | 25,000 |
| Br str Chester, Continent, o's acc, tank. | 22,000 |
| Aug 26 | |
| Nor shp Tagal, U K or Cont, p t | 6,000 |
| Nor shp Artemis, Stockholm, p t | 4,000 |
| Br str Broombaugh, Havre, 4s 3d.....cde | 8,300 |
| Br str Astral, U K, o's acc, tank | 22,000 |
| Br str La Flandre, Cont, o's acc, tank,.. | 24,000 |
| PHILADELPHIA | |
| April 29 | |
| Am sh Isaac Reed, Japan, 36½c.....cs | 50,000 |
| May 7 | |
| Am sh Emily Reed, Japan, 36½c.....cs | 57,000 |
| June 4 | |
| Br str Thordisa, St Loubes, 3s 10½d..cde | 10,000 |
| June 24 | |
| Am sh Wm R Grace, Japan, 35½c.....cs | 65,000 |
| Nor bk Rachel, Malmo, 4s 6d | 3,200 |
| June 26 | |
| Aus bk Tri Sina, Fiume, 3s 6d.....cde | 5,000 |
| Aus bk Trojedinca, Fiume, p t | 3,000 |
| June 27 | |
| Ger bk Laura & Gertrude, U K or Cont, p t | 5,500 |
| June 29 | |
| It bk Confidenza, w c Italy, 22½c.....cs | 20,000 |
| July 1 | |
| Nor bk Hertha, Ger Baltic, 4s 6d | 3,500 |
| July 2 | |
| Br str Inflexible, London, 3s 1¼d | 10,000 |
| July 8 | |
| It brg Sollicito, Genoa, 4s | 2,200 |
| July 9 | |
| It bk Unions, U K, 4s | 2,500 |
| July 12 | |
| Am bk Silicon, Sables d' Olonne, 5s..cde | 2,100 |
| July 13 | |
| Nor bk Hector, Baltic, pt | 2,600 |
| July 16 | |
| Br str Lumen, Rotterdam, o's acc, tank. | 20,000 |
| Br str Kasbek, Antwerp, o's acc, tank... | 20,400 |
| Sp str Catalan, Dublin, 3s 3d | 6,500 |
| July 19 | |
| Br sh Ben Douren, Japan, 34c.....cs | 80,000 |
| July 20 | |
| Dtch sh Emanuel, Dutch port, 3s 3d | 10,000 |
| July 22 | |
| Fr bk Meridian, Reunion, 58c.....cs cde | 18,000 |
| July 23 | |
| Nor bk Norma, Baltic, p t | 2,500 |
| July 25 | |
| Nor bk Marie, Baltic, 4s 6d | 2,600 |
| Br sh Asiana, St Loubes, 4s | 7,200 |
| July 30 | |
| Aus bk Tri Sina, Fiume, pt.....cs cde | 30,000 |
| Nor bk Drolning Sophie, Sables d'Oloune, 4s 6d.....cde | 2,900 |
| July 31 | |
| Nor shp Jorisberg, Baltic, p t | 7,800 |
| August 1 | |
| Dtch bk Ardjaene, Amsterdam, 3s 4½d | 8,500 |
| August 2 | |
| Ger ship Lizzie and Eugenie, Cont, pt | 8,000 |
| Ger ship Geestemunde, U K or Cont, pt. | 7,000 |
| Br ship Japphire, Continent, pt | 8,000 |
| Nor bk Hebe, Ger Baltic, 4s 5d | 3,000 |
| Am ship Frances, Japan, pt.....cs | 70,000 |
| August 5 | |
| It bk Confidenza, Medit, pt.....cs | 19,000 |
| It bk Antonio Nadre, Cagliari fo. pt...cs | 20,000 |
| It bk Innocenta, Medit, pt.....cs | 26,000 |
| August 10 | |
| It bk San Luigi, Plymouth or Exmouth, 4s | 2,500 |
| August 12 | |
| Br str Rock Light, London, o's acc, tank | 25,000 |
| Ger shp Deutschland, Hamburg, 3s 9d | 8,000 |
| Nor bk Tordenskjold, Continent, p t | 7,000 |
| Nor bk Alf, Danish port, 4s 4½d | 3,000 |
| Br bk Galatea, London, 3s 3d | 7,200 |
| Aug 6 | |
| Fr bk Karikal, Port du Bouc, 3s 10d | 4,200 |
| Nor bk Daphne, Baltic, p t | 3,000 |
| It bk Principio, Lisbon, 18c.....cs | 16,000 |
| Aug 7 | |
| Nor bk Otto, Ger Baltic, p t | 3,000 |
| Sp bk Tafalla, Barcelona, o's acc ..cde | 6,000 |
| Ger str Hans & Kurt, Hamburg, o's acc tank | 24,000 |
| Aug 10 | |
| It bk Teresa Accame, Cagliari f o, p t.cs | 37,000 |
| Am shp Frances, Japan, p t .....cs | 50,000 |
| August 13 | |
| It bk Barbara Preve, Medit, pt.....cs | 25,000 |
| August 14 | |
| Swed bk Iolani, Copenhagen or Aarhus, 4s 1½d | 4,000 |
| August 15 | |
| Br bk Aspotogen, Dunkirk, 4s 3d.....cde | 5,500 |
| August 17 | |
| It bk Angela de Amore, Medit, pt.... cs | 35,000 |
| It bk Cattolico, Medit, pt.....cs | 35,000 |
| August 19 | |
| Br bk Thos Keillor, Mondon, 3s 3d | 6,600 |
| August 20 | |
| Am sh McLaurin, Japan, 35c.....cs | 50,000 |
| It bg Salvatore, Cagliari f o, pt.....cs | 10,000 |
| August 22 | |
| Nor bk Eleizer, Ger Baltic, p t | 4,000 |
| Ger str Gluckauf, Bremen, o's acc, tank | 18,000 |
| August 23 | |
| Br str Crown Prince, Dunkirk, 4s 3d.cde | 6,500 |
| August 24 | |
| It bk Rosa C, Gibraltar f o, p t.....cs | 22,000 |
| August 26 | |
| Ger shp Frederica, Bremen or London, 3s | 8,000 |
| BOSTON | |
| May 18 | |
| Br sh Elsmere, Calcutta, 25c.....cs. | 115,000 |
| May 21 | |
| Br shp Ben Venue, Calcutta, 24½c.....cs | 80,000 |
| May 22 | |
| Am shp Henry Failing, Hiogo, 35½c...cs | 70,000 |
| Am shp Joseph S Spinney, Japan, 35c..cs | 70,000 |
| May 25. | |
| Sp bk S F G, Barcelona, 4s.....cde | 3,500 |
| Br str Northgate, Rouen, 4s.....cde | 7,000 |
| July 11 | |
| Aus bk Matter, Smyrna, pt.....cs | 15,0 |
| July 16 | |
| Am bk Jas H Ropes, Bombay, pt.....cs | 25,0 |
| BALTIMORE | |
| August 13 | |
| Ger str Pollux, Hamburg, o's acc, tank. | 20,000 |

## Petroleum and Gas Fields.

Mr. John F. Carll, who has been the Assistant Geologist of the Survey in the oil regions since 1874, and whose "Reports of Progress" have been published by the Board of Commissioners, has just sent in his fifth and last report on oil and gas brought up to date.

As to the various oil fields, the production is steadily decreasing. The Allegany (N. Y.) field has fallen off in two years from 5,176 to 3,300 barrels per day; the Bradford (McKean county) field from 22,422 to 17,350; the Kane and Elk district from 5,702 to 935; the Warren and Forest district (Cherry Grove, Cooper, Ballitown), from 7,999 in 1883 to 680 in 1888,

In the Venango, Clarion and Butler fields new pools have been found, but no material enlargement of the territory has resulted from an immense amount of unrestricted prospecting; for, in 1887, 837 wells were drilled, 249 of which were dry, and in 1888, 963 were drilled, 231 of which were dry.

In the comparatively new Washington and Shannopin district the average daily runs in 1886 were 11,872 barrels, and in 1888 7,872 barrels. In the last two years 445 wells were sunk in this district, nearly one-third of them (137) being dry holes.

The still newer Mt. Morris oil and gas field, on the West Virginia State line, discovered in 1886, has proved to be very promising, yielding much from the old Butler first sand, which is 50 feet thick in the old Butler oil region, but is here swelled to 300 feet, and called the "Big Injun."

The tables show that during the last two years 2,413 productive wells and 811 dry holes have been completed, nearly all of them located within these prescribed limits, and in addition to these several hundred gas wells have been sunk, all of which are so many negative tests for oil.

In 1886 the white sand horizon was producing daily 45,560 barrels, and the Bradford or black sand horizon was producing 32,668 barrels (in all 78,228 barrels) daily; and the steady decrease of production in both brought the figures down, in December, 1888, to 29,349 and 20,680—50,029 barrels daily.

To take in all the fields the following short table will show the decrease in the annual production:

| | |
|---|---|
| 1886 | 25,080,460 |
| 1887 (in spite of 1,694 new wells) | 21,286,500 |
| 1888 (in spite of 1,530 new wells) | 16,126,580 |

the "shut down" being responsible for only about 1,500,000 barrels of this decline; for the October daily average before the shut down was 58,942, and the December daily average after the shut down was 50,029.

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PARIS, FRANCE, See page 1.
E. COEZ & CO., St Denis, France, see page 58.
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## IMPORTS, EXPORTS, DOMESTIC RECEIPTS, Etc.

### IMPORTS ENTERED AT NEW YORK FOR CONSUMPTION.

ACID ACETIC—80 pgs, M Kauher, Christel, Bremen
BENZOIC—6 cs, Schering & G, Westernland, Antwerp
BORACIC—2 pgs, 220lb, L W Morris & Son, Rhaetia, H'burg
2 cks ex Spain, in our last, should have been reported to Hammill & Gillespie
CARBOLIC—6 cs, Schering & G, Rhaetia, Hamburg
23 cs, Schering & G, Suevia, Hamburg
CITRIC—25 kgs, 2,800lb, Rogers & P, E Monarch, London
PHOSPHORIC—1 cs, Schering & G, Suevia, Hamburg
PICRIC—28 cs, 2,240lb, R Holliday's Sons, Alaska, L'pool
PYRO—4 cs, Schering & G, Suevia, Hamburg
SAL—5 cs, Schering & G, Suevia, Hamburg
ALBUMEN—28 cks, A Klipstein, Santiago, Hull
31 cs, 13,428lb, Geisenheimer & Co, Montauk, H'burg
25 cks, 10,925lb, Schulze-Berge & K, Montauk, Hamburg
ALIZARINE—25 cks, Pickhardt & K, Adam, A'dam
25 cks, 10,424lb, Geisenheimer & Co, Alaska, L'pool
250 cks, Pickhardt & K, Veendam, R'dam
5 kgs, 500lb, E Schlbach & Co, Illinois, Antwerp
33 pgs, 12,900lb, Lutz & M, Suevia, Hamburg
42 pgs, 13,890lb, Lutz & M, Fulda, Bremen
ALUMINOUS CAKE—70 cks, E H Watson, Critic, Newcastle
AMMONIA CARB—50 cks, 29,285lb, J L & D S Riker, Alaska, L'l
MURI—40 cks, 30,664lb, C De P Field, J City, Bristol
SAL—15 cks, 12,395lb, C De P Field, J City, Bristol
ANGOSTURA BARK—4 bls, 465lb, Kunhardt & Co, E Hough, Trinidad
ANILINE COLORS—28 cks, 29 cs, Pickhardt & K, Amsterdam Amsterdam
12 cks, 1 cs, Geisenheimer & Co, Saale, Bremen
4 cks, 1,000lb, R Holliday's Sons, Alaska, Liverpool
3 cks, P H Karcher & Co, La Normandie, Havre
4 cks, 1,400lb, A Klipstein, Holland, London
5 kgs, F Bredt & Co, Westernland, Antwerp
6 pgs, 600lb, A Klipstein, Westernland, Antwerp
12 cks, Schulze-Berge & K, Westernland, Antwerp
3 kgs, 230lb, J J Keller & Co, Westernland, Antwerp
28 cks, C Georgi, Veendam, Rotterdam
60 cks, 6 cs, Pickhardt & K, Veendam, Rotterdam
20 cks, 8,924lb, Schulze-Berge & K, Illinois, Antwerp
14 cks, 7 cs, E Schlbach & Co, Illinois, Antwerp
40 cks, 8 cs, Boston Dye & Chem Co, Trave, Bremen
47 pgs, 5,325lb, W T Matheson & Co, Fulda, Bremen
45 pgs, 4,590lb, Sykes & Street, La Gascogne, Havre
10 pgs, 2,175lb, Lutz & M, Suevia, Hamburg
OIL—3 dms, Boston Dye & C Co, Trave, Bremen
SALTS—51 cks, 22,000lb, Pickhardt & K, Westernland Antwerp
10 cks, W J Matheson & Co, Holland, London
40 pgs, 9,350lb, Schulze-Berge & K, Westernland, Ant'p
68 cs, 14,955lb, A Klipstein, Illinois, Antwerp
ANNATTO SEED—9 bbls, 1,524lb, Gillespie Bros & Co, Alene Kingston
4 bgs, Sandford & K, Alene, Kingston
2 bbls, A S Lascelles & Co, Alene, Kingston
ANTIMONY—50 cks, 33,600lb, E Hill's Son & Co, Critic, Newc'le
30 cks, 20,160lb, Phelps, D & Co, Holland, London
SULPH—12 bbls, 1,680lb, W A Brown & Co, Germanic, L'pool
ARCHIL—12 cks, 7,709lb, A DeRonde & Co, Germanic, L'pool
5 cks, 2,100lb, Sykes & S, La Gascogne, Havre
ARGOLS—42 cks, 56,573lb, N Y Tartar Co, Pocassett, Messina
22 cks, 22,697lb, Loeb & Bros, C of Berlin, Liverpool
ARNICA FLOWERS—17 bls, 2,290lb, R Brueckner & Co, Santiago, Hull
73 bls, 9,361lb, McKesson & R, Santiago, Hull
ARROWROOT—15 cs, J P Smith, Holland, London
3 cs, Leaycraft & Co, Alene, Kingston
ARSENIC—45 bbls, 13,785lb, Schulze-Berge & K, Westernland Antwerp
ASPHALTUM—3 cks, Gabriel & S, Christel, Bremen
330 bgs, Teilado, G & Co, J R Stanhope, Cardenas
BALSAM—1 cs, G Amsinck & Co, Ailsa, Savanilla
COP—3 bbls, Dodge & O, Allianca, Maranham
9 cs, 450lb D A DeLima & Co, Athos, Savanilla
10 cs, 939lb, Kunhardt & Co, E Hough, Trinidad
10 bbls, G C Cowl, Jerome, Para
4 cs, 550lb, Mecke & Co, Athos, Savanilla
4 cs, 321½lb, J Agostini, El Callao, C Bolivar
BARK—25 bls, 4,375lb, McKesson & R, Santiago, Nassau
BARYTES—71 cks, 63,932lb, Gabriel & S, Christel, Bremen
BAY LEAVES—5 bls, C Nodea & Co, Muriel, Domenica
23 bls, Fritzsche Bros, Muriel, Domenica
RUM—15 bbls, 696 gls, Tyler & F, Allianca, St Thomas
1 cs, Fritzsche Bros, Muriel, Domenica
BELLADONNA ROOT—1 bl, 178lb, M Koenigsheim, Santiago Hull
BISMUTH—3 bbls, 4 cs, C Pfizer & Co, Aurania, L'pool
BLEACH—126 cks, 135,300lb, J Lee & Co, Critic, Newcastle
215 cks, 224,140lb, E Hill's Son & Co, Critic, Newcastle
44 cks, 56,950lb, Wing & E, Italy, Liverpool
116 cks, 111,851lb, J L & D S Riker, Italy, Liverpool
22 cks, 22,648lb, Sumner & Co, Italy, Liverpool
50 cks, 56,002lb, J Lee & Co, Egypt, Liverpool
BONES—886,691lb, W R Peters & Co, Michele, Naples
BRIMSTONE—600 tons, Battelle & R, Pocassett, Girgenti
500 tons, Parsons & P, Pocassett, Gergenti
BRONZE POWDER—10 cs, Perry & R, Saale, Bremen
2 cs, A Sartorius & Co, Ems, Bremen
5 cs, T Reissner, Ems, Bremen
4 cs, I Vought & Co, Ems, Bremen
7 cs, Fuchs & L, Rhaetia, Hamburg
30 cs, 13,945lb, J Marsching & Co, Ems, Bremen
BURGUNDY PITCH—100 pgs, 11,000lb, M Koenigsheim, A'dam, A'dam
10 pgs, 1,226lb, R Hillier's Son Co, Belgenland, Ant
CACAO BUTTER—12 pgs, G A Aiden & Co, Veendam, R'dam
28 pgs, 4,956lb, H Martin, Veendam, R'dam
48 bls, 9,081lb, P Bauer & Co, Veendam, R'dam
CALAMUS ROOT—6 cs, 891 lb, M Koenigsheim, Santiago, Hull
CAMPHOR—344 tubs, 40,904lb, C Pfizer & Co, Importer, Hiogo
1,539 tubs, 257,373lb, H J Baker & Bro, Importer, Hiogo
CANARY SEED—1 bg, 100lb, A Merkel, Ems, Bremen
1 bg, 100lb, C Reiche & Bros, Ems, Bremen
CARAWAY SEED—100 bls, 11,000lb, L German, Veendam, R'm
CARDAMOMS—3 cs, 167lb, J Clay, E Monarch, London
5 cs, A O Schoonmaker, E Monarch, London
CANTHARIDES—2 pgs, M Koenigsheim, Santiago, Hull
CARLSBAD SALTS—124 cs, Eisner & M Co, Holland, London
CASSIA FISTULA—10 bkts, 1,731lb, J Clay, Adam, A'dam
CASTOR SEED—159 bgs, 383 bu, H J Baker & Bro, Allianca, Pernambuco
1,348 bgs, 221,072lb, J Lee & Co, T Hill, London
CEMENT—1,400 cks, Batjer & M, Christel, Bremen
500 cks, Dickinson Bros & K, E Monarch, London
750 cks, H Fleming, E Monarch, London
500 cks, C J Stevens, E Monarch, London
500 cks, E A Chatfield, Critic, Newcastle
1,000 cks, Batjer & M, Critic, Newcastle
500 cks, Sinclair & B, Holland, London
500 cks, Marcial & Co, Holland, London
500 cks, Dickinson Bros & K, Holland, London
1,000 cks, E Thiele, Westernland, Antwerp
1,000 cks, Harbier & Co, Westernlend, Antwerp
300 cks, A C Babson, Montauk, Hamburg
1,000 bbls, Dickinson Bros & K, Illinois, Antwerp
1,000 cks, E Thiele, Illinois, Antwerp
548 cks, J W Seligman & Co, Illinois, Antwerp
CHALK—38 cks, 11,175lb, McKesson & R, Holland, London
CHAMOIS—1 cs, T L Lutkins, La Normandie, Havre
2 cs, R Young, E Monarch, London
1 cs, F R Arnold & Co, La Normandie, Havre
12 cs, T L Lutkins, Germanic, L'pool
CHAMOMILES—16 cks, 2,400lb, R Brueckner & Co, Santiago, Hull
9 pgs, 1,425lb, McKesson & R, Santiago, Hull
25 cs, 2,750lb, McKesson & R, Westernland, Antwerp
25 cs, 2,750lb, Lazell, D & Co, Westernland, Antwerp
20 cs, 2,200lb, Tyler & F, Westernland, Antwerp
FLOWERS—5 bls, 550lb, Peek & V, Westernland, Ant'p
3 cks, 520lb, M Koenigsheim, Santiago, Hull
CHEMICALS—1 cs, J Clay, Amsterdam, Amsterdam
128 cs, 1 ck, T Weicker, Amsterdam, Amsterdam
24 pgs, 10,478lb, Pickhardt & K, Amsterdam, A'dam
26 cs, W H Schieffelin & Co, Penniand, Antwerp
17 pgs, Schering & G, Rhaetia, Hamburg
1 ck, O Hann, Westernland, Antwerp
42 cs, Rothschild Bros & Co, Westernland, Antwerp
20 cs, Schering & G, Westernland, Antwerp
75 cs, W H Schieffelin & Co, Westernland, Antwerp
2 pgs, Lutz & M, Suevia, Hamburg
5 cs, L Bernard & Co, La Gascogne, Havre
15 cs, Lutz & M, Fulda, Bremen
CHESTNUT EXT—66 cs, 13,307lb, Geisenheimer & Co. Pocassett, Genoa
CHINA CLAY—50 bgs, 12,320lb, H Merz, Alaska, Liverpool
CINCHONA BARK—30 bls, 2,848lb, J Clay, E Monarch, London
CLOVES—100 bls, 13,104lb, L German, Holland, London
202 bls, 24,172lb, J H Recknagel, Holland, London
COAL TAR PROD—1 cs, P H Karcher & Co, La Normandie, Hav
3 cs, W J Matheson & Co, Holland, London
3 cks, Pickhardt & K, Veendam, Rotterdam
COCAINE—1 cs, E R Squibb, Aug Victoria, Hamburg
COCHINEAL—41 bgs, 7,871lb, Beach & Co, E Monarch, London
COLCHICUM SEED—1 bl, 220lb, M Koenigsheim, Santiago, Hull
COLOCYNTH—1 cs, 143lb, R Brueckner & Co, Santiago, Hull
1 cs, 165lb, Laz ll D & Co, Santiago, Hull
COLORS—40 pgs, 8,246lb, Pickhardt & K, Amsterdam, A'dam
1 cs, L A Saloman & Bro, Rhaetia, Hamburg
3 pgs, Berger & W, Ems, Bremen
8 cs, C T Raynolds & Co, La Normandie, Havre
3 pgs, 540lb, J H Bonnell & Co, Holland, London
3 pgs, R F Downing & Co, Holland, London
2 kgs, 370lb, A K Gardiner & Bro, Veendam, A'dam
13 cks, Pickhardt & K, Veendam, A'dam
CORK—2 bls, Colgan & Co, Aurania, L'pool
SQUARES—19 bls, Colgan & Co, Aurania, L'pool
49 bls, J Torras, Holland, London
WOOD—590 bdls, Gudewill & B, Progreso, Lisbon
550 bdls, J Robinson & Co, Progreso, Lisbon
500 bls, J Robinson & Co, A Guarguilo, Seville
CORIANDER SEED—15 bls, 2,755lb, Lehn & F, Holland, London
CUDBEAR—4 cks, 1,568lb, A DeRonde & Co, Germanic, L'pool
CUBEBS—27 bgs, Dodge & O, Amsterdam, A'dam
CUMMIN SEED—5 bgs, A O Schoonmaker, E Monarch,

CUTCH—500 bgs, Sharpless & Co, Centennial, Calcutta
1,600 bgs, 163,911lb, Ralli Bros, Struan, Calcutta
CUTTLEFISH BONE—21 cs, 4,320 lb, McKesson & R, Importer Hiogo
DANDELION ROOT—9 bls, 1,532lb, J Clay, A'dam, A'dam
DEXTRINE—200 bgs, 43,320lb, J Davie's Sons, Hekla, Stettin
20 cks, 16,714lb, C Morningstar & Co, Germanic, L'pool
DIVI DIVI—221 bgs, Foulke & Co, Curacoa, Curacoa
57 bgs, 6,365 lb, B S de Garmendia & Co, P Maurits Carupano
DOG GRASS—9 bls, 1,804lb, R Brueckner & Co, Santiago, Hull
DRAGON'S BLOOD—37 cs, G C Cowl, Erin, London
DRUGS—2 cs, W H Schieffelin & Co, E Monarch, London
15 pgs, M Zeller, Santiago, Hull
16 pgs, Dodge & O, Holland, London
DUTCH METAL—1 cs, I Vought & Co, Ems, Bremen
2 cs, Fuchs & L, Ems, Bremen
1 cs, Fuchs & L, Rhaetia, Hamburg
5 cs, Perry & R, Ems, Bremen
1 cs, J Marsching & Co, Ems, Bremen
DYEWOOD EXT—20 cks, 10,080 lb, J C Bloomfield & Co, Alaska Liverpool
125 pgs, 27,685lb, Pickhardt & K, Rhaetia, Havre
20 pgs, 11,000lb, Sykes & S, La Gascogne, Havre
EGG YOLK—10 cks, 4,175lb, A Klipstein, Santiago, Hull
ELATERIUM—1 cs, Lehn & F, T Hill, London
FISH SOUNDS—25 cs, 4,592lb, H Martin, E Monarch, London
FLOCKS—25 bls 2,205lb, H Kohnstamm & Co, La Normandie Havre
FLOWERS—8 pgs, McKesson & R, Santiago, Hull
FRANKFORT BLACK—18 bgs, G H Morrell & Co, R Hill, Lon
5 cks, Berger & W, Ems, Bremen
12 cks, 4,955lb, C Wix & Co, Veendam, R'dam
FUSTIC—250 tons, J M Ceballos & Co, Elgiva, La Guayra
EXT—45 cks, Banning, B & Co, La Normandie, Havre
GALL EXT—1 cs, Schulze-Berge & K, Westernland, Antwerp
GAMBIER—936 bls, 238,918lb, J R Townsend, E Kidder, S'pore
800 bls, 225,720lb, Victor & A, E Kidder, Singapore
1,709 bls, 447,278 lb, J R Townsend, E Monarch, London
GAMBOGE—50 cs, G C Cowl, Erin, London
4 cs, Lehn & F, T Hill, London
GELATINE—27 cs, J P Smith, Holland, London
5 cs, W H Schieffelin & Co, Holland, London
31 cs, 3,0 0 lb, Lutz & M, Moutauk, Hamburg
GINGER—34 bbls, 4,300lb, J E Kerr & Co, Alene, Kingston
55 bbls, 7,101lb, Leaycraft & Co, Alene, Kingston
50 bbls, 5,000lb, A S Lascelles & Co, Alene, Kingston
GLASS CATH—11 cs, 8,586lb, J Fitzpatrick & Co, Circassia, Gl'w
PLATE—49 cs, 18,084 ft, Heroy & M, Belgenland, Ant
4 cs, 1,314 ft, J Zahn, Ems, Bremen
7 cs, 2,133 ft, Heroy & M, Alaska, Liverpool
24 cs, 8,087 ft, H H Cahn, Westernland, Antwerp
49 cs, 21,878 ft, Heroy & M, Westernland, Antwerp
7 cs, 1,776 ft, A Van Praag & Co, Westernland, Ant
24 cs, 8,217 ft, S Bache & Co, Westernland, Antwerp
24 cs, 6,372 ft, J Kahn, Westernland, Antwerp
1 cs. 445 ft, Holbrook Bros, Veendam, R'dam
51 cs, 14,631 ft, H H Cahn, Illinois, Antwerp
2 cs, Holbrook Bros, Germanic, L'pool
14 cs, 1,475 ft, P Semmer G Co, Italy, L'pool
6 cs, 1,318 ft, J Kahn, Illinois, Antwerp
WINDOW—158 pgs, 36,101lb, Heroy & M, Alaska, L'pool
54 cs, 4,320lb, J F Heyne, Westernland, Antwerp
434 cs, 34,720lb, Dougherty, E & M, Westernland, Ant'p
489 cs, 24,450lb, T W Morris & Co, Westernland, Antw'p
4,247 cs, 264,240lb, J Fitzpatrick & Co, Westernland, An'p
5,595 cs, 307,620lb, S Bache & Co, Westernland, Antwerp
1,231 cs, 61,550lb, J Kahn, Westernland, Antwerp
628 cs, 29,170 lb, Vanhorne, G & Co, Westernland, Ant'p
147 cs, 11,256lb, Holbrook Bros, Westernland, Antwerp
GLAUBER SALTS—5 cks, C Georgi, Veendam, Rotterdam
GLUCOSE—25 cks, 24,813lb, V Loewi, Hekla, Stettin
GLUE—20 cks, 10,930lb, P Bauer & Co, Hekla, Stettin
148 bgs, 16,576lb, A K Gardiner & Bro, J City, Bristol
12 bls, S Isaacs & Co, Alaska, Liverpool
30 cks, 10,000lb, P Bauer & Co, Santiago, Hull
33 pgs, 6,160lb, A E Reiman, Holland, London
GLYCERINE CRUDE—35 dms, 37,807lb, J E Schweizer & Co Santiago, Hull
15 dms, 16,337lb, Marx & R, C of Berlin, L'pool
REF—50 cks ex Britannia, from Marseilles to Sawer, W & Co, in our last, should have been reported as CRUDE Glycerine
GUM—12 bgs, Stallman & F, La Normandie, Havre
AMMONIAC—2 cs, A O Schoonmaker, E Monarch, L'don
ANIMI—15 cs, 2,800lb, G B Morewood & Co, Holland, L'don
24 cs, 5,008lb, Knudson, P & Co, Holland, London
ARABIC—6 bbls, Hogins & Lee, E Monarch, London
5 cs, 621lb, Thurston & B, Aurania, L'pool
16 cs, 4,107lb, D E Green, Holland, London
CHICLE—1 pg, 220lb, J W Wilson & Co, C of Alexandria Tampico
COPAL—200 cs, 40,300lb, J R Townsend, E Kidder, S'apore
160 cs, 22,171lb, J R Townsend, C Luling, Rotterdam
341 cs, 169,457lb, L C Gillespie, E Kidder, Singapore
698 cs, 136,794lb, E Hill's Son & Co, E Kidder, Singapore
259 cs, 50,402lb, W H Scheel, E Kidder, Singapore
278 cs, 452,704lb, Glenshiel, Singapore
DAMAR—25 cs, 4,915lb, Rogers & Pyatt, E Monarch, L'don
28 cs, 8,597lb, Walker Gum Co, Amsterdam, A'dam
KAURI—990 cs, 200,102lb, E Hill's Son & Co, A Abbott, Auckland
1,491 cs, 373,750lb, Knudson, P & Co, A Abbott, Auck'd
750 cs, 182,336lb, Walker Gum Co, A Abbott, Auckland
749 cs, 179,760lb, J R Townsend, A Abbott, Auckland
400 cs, 89,600 lb, C T Raynolds & Co, A Abbott, Auckl'd
1,494 cs, 373,750lb, Knudson, P & Co, A Abbott, Auckl'd
TRAGACANTH—14 cs, J A & W Bird & Co, Erin, London
153 pgs, 26,565lb, Thurston & B, Holland, London
GYPSUM—100 cks, 73,948lb, G A & E Meyer, Italy, L'pool
HERBS—25 bgs, Rosenstein Bros, Westernland, Antwerp
HOREHOUND—7 bls, 2,228lb, M Koenigsheim, Santiago, Hull
INDIAN RED—10 cks, 13,046lb, G A & E Meyer, Santiago, Hull
AUX—14 cks, 21,560lb, A Klipstein, Westernland, A'werp
EXT—8 cks, 5,924lb, Pickhardt & K, Holland, London
REF—8 cs, Banning, B & Co, Westernland, Antwerp
INDIGO EXT—10 cks, Banning B & Co, Germanic, Liverpool
INDIGOTINE—1 kg, 50lb, J J Keller & Co, Westernland, A'w'p
INSECT FLOWERS—27 bls, 12,242lb, Stallman & F, Aurania, L'l
IPECAC—2 bls, Dodge & O, Holland, London
IRISH MOSS—30 bls. 3,300lb, Lazell, D & Co, Santiago, Hull
IRON OXIDE—18 cks, Hemingway & Co, E Monarch, London
25 bbls, G W Sheldon & Co, Aurania, Liverpool
JAPAN WAX—100 cs, 20,665lb, F G Strohmeyer & Co, Importer, Hiogo
LAMPBLACK—4 cs, 448lb, G W Sheldon & Co, E Monarch, L'n
LANOLIN—10 cs, 1,000lb, Lutz & M, Fulda, Bremen
LEECHES—5 cs, F Paturel & Co, La Gascogne, Havre
LEMON JUICE—2 pps, 261½ gls, R Brueckner & Co, Pocassett, Messina
LIME ARSEN—183 cks, Hemingway & Co, E Monarch, L'don
JUICE—8 hhds, 400 gls, Wattson & F, Muriel, Domenica
4 hhds, 208 gls, T Wattson & Son, Muriel, Domenica
2 pun, Bartram Bros, Muriel, St Kitts
LINSEED—4,084 bgs, 11,243lb, J A Dean & Co, E Monarch, L'don
LOGWOOD—40 tns, W & A Leaman, Alene, Aux Cayes
347½ tns, Thebaud Bros, Elgiva, Laguna
205 tns, W & A Leaman, G W Lochner, Nassau
135 tns, H Kaner & Co, Saginaw, Pt de Paix
50 tns, Lyon & Co, Alene, Aux Cayes
233 tns, Kunhard & Co, St Croix, Cape Hayti
MACE—35 cs, 2,333lb, Bidwell & F, Monmouthshire, Singapore
MADDER—5 cks, 4,954lb, Stamford Mfg Co, Veendam, R'dam
6 cks, 9,491lb, J W Morgan, Amsterdam, Amsterdam
MAGNESIA CALCINED—30 cs, 2,500lb, G A & E Meyer, Critic, Newcastle
MALT EXT—1,000 cs, Eisner & M Co, Montauk, Hamburg
MATCHES—156 cs, C Rosenstein & Co, Santiago, Hull
MILK SUGAR—4 cks, 2,638lb, J Clay, Amsterdam, A'dam
5 cks, 10 cs, W H Schieffelin & Co, Illinois, Antwerp
MUSK—1 cs, W H Schieffelin & Co, E Monarch, London
1 cs, 63 ozs, G Luecders, Aurania, Liverpool
NUTMEGS—50 cs 3,896lb, Thompson & T Spice Co, Amsterdam, Amsterdam
101 cs, 6,738lb, J W Phyfe & Co, E Monarch, London
33 cs, 2,261lb, J O'Donohue's Sons, E Kidder, Singapore
6 cs, 1,307lb, G H Morewood & Co, Holland, London
200 cs, 14,014lb, L German, Veendam, Rotterdam
98 cs, G S Adrian & Co, Veendam, Rotterdam
20 cs, 1,360lb, Bidwell & F, Monmouthshire, Singapore
NUX VOMICA—20 bgs, 3,161 lbs, W H Schieffelin & Co, Holland, London
OCHER—65 cks, 11,000lb, Pomeroy & F, Holland, London
OIL BERGAMOT—22 cs, 550lb, F Paturel & Co, Pocassett, M'a
CEDAR—1 cs, T T Grossmith, La Normandie, Havre
COCOANUT—91 bbls, T M Marc, Germanic, L'pool
CODLIVER—50 bbls, 1,500 gls, W H Schieffelin & Co, Santiogo, Hull
25 bbls, Eimer & A, Veendam, R'dam
CUBEBS—1 cs, 50lb, Fritzsche Bros, Saale, Bremen
ESSENTIAL—2 cs, T T Grossmith, La Normandie, Havre
GERANIUM—1 cs, T T Grossmith, La Normandie, Havre
HARLEM—22 cs, Stallman & F, Adam, A'dam
LAVENDER—10 cs, 1,000lb, C Rockhill, La Normandie, H'e
2 cs, Fritzsche Bros, La Normandie, Havre
1 cs, T T Grossmith, La Normandie, Havre
LEMON—12 cs, 440lb, Fritzsche Bros, Saale, Bremen
20 cs, 500lb, Thurber, W & Co, Wingates, Messina
50 cs, 1,172lb, E Hill's Son & Co, Pocassett, Messina
50 cs, 1,250lb, L & J Michaelis, Pocassett, Messina
25 cs, 625lb, W H Schieffelin & Co, Pocassett, Messina
20 cs, 500lb, F Paturel & Co, Pocassett, Messina
MYRBANE—2 dms, W J Matheson & Co, Canada, London
NEROLI—1 cs, T T Grossmith, La Normandie, Havre
ORANGE—4 cs, 110lb, Fritzsche Bros, Saale, Bremen
15 cs, 375lb, L & J Michaelis, Pocassett, Messina
RAPE—25 bbls, E Monarch, London
50 bbls, F E Brugman & Co, Tower Hill, London
ROSE—2 cs, 65lb, Fritzsche Bros, Saale, Bremen
2 cs, 504 ozs, G Luecders, Aurania, L'pool
ROSEMARY—2 cs, T T Grossmith, La Normandie, Havre
SANDAL—1 cs, T T Grossmith, La Normandie, Havre
SASSAFRAS—28 cs, Schoellkopf, H & M, Rhaetia, H'burg
THYME—2 cs, T T Grossmith, La Normandie, Havre
WINTERGREEN—2 dms, 1,120 lb, Fritzsche Bros, Saale Bremen
YLANG YLANG—1 cs, T T Grossmith, La Normandie, H'e
ORANGE LEAD—20 cks, 12,078 lb, J L Smith & Co, Critic, Newcastle
30 cks, 21,284lb, Pickhardt & K, Veendam, R'dam
28 cks, 22,598lb, J M Huber, Veendam, R'dam
PEEL—70 bgs, 5,600lb, Fritzsche Bros, Alene, Jacmel
195 bgs, 14,292 lb, Pim, Forwood & Co, Alene, Kingston
WATER—3 cs, T T Grossmith, La Normandie, Havre
PARAFFINE—5 cs, 717lb, Jiminez, H & Co, Saginaw, St Domingo
PATENT DRYER—4 cks, Hemingway & Co, E Monarch, L'don
PEPPER—175 bgs, 26,976lb, Waterbury & F, E Monarch, Lon
435 bgs, 56,704lb, E Monarch, London
BLACK—734 bgs, 112,072lb, Bidwell & F, E Kidder, S'pore
611 bgs, 74,704lb, J W Phyfe & Co, Holland, London
WHITE—348 bgs, 57,351lb, J H Recknagel, E Kidder, S'pore
PERFUME—4 cs, R F Downing & Co, E Monarch, London
17 cs, Park & T, La Normandie, Havre
4 cs, F R Arnold & Co, La Normandie, Havre
4 cs, M Meyer, La Normandie, Havre
4 cs, Acker, M & C, Santiago, Hull
PHOSPHORUS—75 cs, 8,250lb, C Pfizer & Co, Santiago, Hull
PIMENTO—80 bgs, 12,684lb, Pim, Forwood & Co, Alene, Kings'n
18 bgs, 2,952lb, Perkins & W, Alene, Kingston
42 bgs, 6,200lb, J E Kerr & Co, Alene, Kingston
40 bgs, 6,000lb, Leaycraft & Co, Alene, Kingston
6 bgs, 900lb, Sandford & K, Alene, Kingston
143 bgs, 18,917lb, A S Lascelles & Co, Alene, Kingston
6 bgs, 957lb, Leaycraft & Co, Tyrian, Sav La Mar
PLUMBAGO—20 cks, 21,695lb, Eagle Pencil Co, Christel, Bremen
210 cks, 119,425lb, Knudson, P & Co, Holland, London
POMADE—12 cs, 2,150lb, T T Grossmith, La Normandie, Havre
POTASH BICARB—10 cks, 2,325lb, McKesson & R, Holland, London
CARB—10 cks, 11,077lb, A Klipstein, Veendam, R'dam
CHLO—50 kgs, 5,600lb, G A & E Meyer, Critic, Newcastle
PRUSS—28 cks, 14,000 C De P Field, S of Indiana, Glasgow
POTATO STARCH—117 cks, Rose & Co, M George, Fredericton, N B
QUINCE SEED—1 bg, A O Schoonmaker, E Monarch, London
QUININE—15 cs, 15,000 ozs, J L & D S Riker, Trave, Bremen
19 cs, 10,000 ozs, L Engelhorn, Trave, Bremen
RAPESEED—2 bgs, 200lb, C Reiche & Bro, Ems, Bremen
2 bgs, 200lb, A Merkel, Ems, Bremen
RHUBARB—17 cs, 1,715lb, J Clay, E Monarch, London
1 cs, Dodge & O, Holland, London
ROOTS—17 bls, 3,042lb, J Clay, Amsterdam, Amsterdam
8 bls, 1,179lb, M Koenigsheim, Santiago, Hull
ROSE LEAVES—4 cs, 220lb, J Clay, Amsterdam, Amsterdam
WATER—2 cs, T T Grossmith, La Normandie, Havre
SAGO—167 bgs, Rosenstein Bros, Westernland, Antwerp
FLOUR—320 bgs, J W Rulon & Co, E Kidder, Singapore
SALTCAKE—71 cks, R Crooks & Co, Italy, Liverpool
SARSAPARILLA—100 bls, 16,248lb, Eggers & H, Carib, Truxillo
7 bls, 1,310lb, J W Wilson & Co, C of Alexandria, Tam'o
SENNA—35 bls, 9,348lb, J Clay, E Monarch, London
SHELLAC—100 cs, 16,576lb, N Y Shellac Co, E Monarch, London
104 cs, L C King & Co, Holland, London
SIENNA—30 cks, 29,819lb, G W Sheldon & Co, Amsterdam, Amsterdam
4 cks, 2,848lb, R Mayer & Co, Rhaetia, Hamburg
SILICA—45 cks, 23,927lb, Heller & Merz, Westernland, Antw'p
SOAP BARK—13 bls, 4,582lb, M Koenigsham, Santiago, Hull
SOAP—49 cks, 18,005lb, Holbrook Mfg Co, Pocassett, Messina
SODA ASH—15 cks, 22,422lb, J Lee & Co, Critic, Newcastle
12 cks, 23,972lb, J Lee & Co, S of Indiana, Glasgow
59 cks, 112,118lb, R Crooks & Co, Italy, L'pool
430 cks, 761,842lb, Wing & Evans, Italy, L'pool
20 cks, 34,136lb, Sumner & Co, Italy, L'pool
74 cks, 112,072lb, J Lee & Co, Germanic, L'pool
102 cks, 112,948lb, Wing & E, Germanic, L'pool
62 cks, 118,444lb, J L & D S Riker, Bothnia, L'pool
67 cks, 112,248lb, E Yarnall & Son, Italy, L'pool
415 cks, 742,940lb, Wing & E, Egypt, L'pool
CAUSTIC—360 dms, 224,494lb, E Hill's Son & Co, Critic Newcastle
88 dms, 55,832lb, J L & D S Riker, Italy, L'pool
250 dms, 152,505lb, T M Marc, Germanic, L'pool
200 dms, 129,295lb, R Crooks & Co, C of Berlin, L'pool
200 dms, 127,745lb, E Yarnall & Son, Italy, L'pool
92 dms, 64,896lb, R Crooks & Co, Bothnia, L'pool
300 dms, 187,400lb, J Lee & Co, Wyoming, L'pool
450 dms, 298,515lb, J Lee & Co, Egypt, L'pool
NITRATE—8,900 bgs, 2,854,707lb, Battelle & R, Lurlei, Pt Olivia
NITRITE—15 bbls, R Holliday's Sons, Adam, A'dam
SULPH—6 cks, 2,016lb, Campbell & Co, E Monarch, L'don
SPONGE—2 bls, Eggers & H, Carib, Truxillo
31 bls, Lebess S Co, Saginaw, Turks Island
15 bgs, J Papodopolo, Santiago, Nassau
SQUILLS—32 bgs, 7,040lb, H Morrison Jr, Pocassett, Messina
STICKLAC—20 cs, N Y Shellac Co, Holland, London
UMAC—252 bgs, 40,320lb, Core & H, Pocassett, Palermo
TALC—30 bgs, 6,615lb, Britannia, Marseilles
TAPIOCA FLAKE—991 bgs, J R Townsend, E Kidder, S'pore
264 bgs, J W Rulon & Co, E Kidder, Singapore
173 bgs, 22,497lb, Bidwell & E, Monmouthshire, S'pore
FLOUR—389 bgs, J R Townsend, E Kidder, Singapore
220 bgs, J W Rulon & Co, E Kidder, Singapore
PEARL—774 bgs, J R Townsend, E Kidder, Singapore
TAR—250 bbls, J Abbott & Co, Santiago, Hull
TONCA BEANS—16 pgs, 9,491 lb, Kunhardt & Co, E Hough Trinidad
TURKEY RED—10 cks, 11,823lb, G A & E Meyer, Santiago, Hull
TURMERIC—500 pkts, 27,291 lb, O S Janney & Co, Centennial Calcutta

MANUFACTURERS W. & A. Gilbey Co. BELFAST IRELAND
Ross's Royal BELFAST GINGER ALE Ginger Ale.
IMPORTING AGENTS M. Rawlinson NEW YORK

Carbonate of Ammonia.
Chlorate of Potash.
Oxalic Acid.
Zinc Dust. (Indigo Auxiliarv.)
Blood and Egg ALBUMEN
Aniline Colors.

Schulze-Berge & Koechl,
186 FRONT STREET, NEW YORK.
IMPORTERS OF CHEMICALS AND DYESTUFFS,
AND SOLE AGENTS FOR
Salol, pat'd, the new Antiseptic.
Made under License of the Patentees of Dr. F. Heyden nachf. Radebeul.

Mirbane Oil.
Pure Aniline Oil and Salt.
SALICYLIC ACID
Archil Extract.
Indigo Extract.
Alizarine.

1,000 pkts, 51,072 lb, J E Whitney, Centennial, Calcutta
ULTRAMARINE—1 cs, J H Bonnell & Co, Holland, London
11 pgs, 4,140lb, C F Zentgraf, Veendam, R'dam
VARNISH—80 pgs, 958 gls, Pomeroy & F, Holland, London
VANILLIN—3 cs, L Bernard & Co, La Gascogne, Havre
VEGETABLE WAX—4 bbls, 591lb, Leaycraft & Co, Tyrian, Sav la Mar
VENETIAN RED—300 cks, R J Waddell & Co, Santiago, Hull
525 bbls, 84,000lb, E Hill's Son & Co, Critic, Newcastle
VENICE TURPENTINE—25 pgs, 3,812lb, Stallman & F, Aurania, Liverpool
WASH BLUE—34 cs, C F Zentgraf, Veendam, R'dam
WORMSEED—10 bls, M Koenigsheim, Santiago, Hull
ZINC OXIDE—100 cks, 22,046lb, L Windmuller & R, Veendam, Rotterdam
150 bbls, 33,069lb, G A & E Meyer, Illinois, Antwerp

## WAREHOUSED.

ACID CITRIC—60 pgs, 8,960lb, McKesson & R, E Monarch, L'don
ANILINE COLORS—44 cks, 25 cs, Pickhardt & K, Amsterdam Amsterdam
4 cks, 200lb, Geisenheimer & Co, Saale, Bremen
5 cks, Schulze-Berge & K, Westernland, Antwerp
45 cks, 2 cs, Pickhardt & K, Veendam, Rotterdam
BAY RUM—42 pgs, 2,895 gls, C M Roof, Allianca, St Thomas
15 pgs, 1,021 gls, W H Schieffelin & Co, Allianca, St Thomas
23 pgs, 919 gls, H A Batjer & Co, Allianca, St Thomas
CACAO BUTTER—14 bgs, 4,433lb, H Martin, Rotterdam, R'dam
CHEMICALS—3 cks, Pickhardt & K, Amsterdam, A'dam
COAL TAR PRODUCTS—2 cs, Pickhardt & K, Veendam, R'm
GLASS WINDOW—1,718 cs, 85,900lb, Vanhorne, G & Co, Westernland, Antwerp
MATCHES—25 cs, G T Noe, Santiago, Hull
SPONGE—9 cs, Mansell & B, Polynesia, Havre

## IMPORTS AT BOSTON.

ALUM—135 bgs, order, Hermann, Antwerp
BLEACH—131 cks, order, Norseman, Liverpool
106 cks, E & F King & Co, Hibernian, Liverpool
169 cks, Baring Bros, Hibernian, Liverpool
134 cks, Lueder & M, Hibernian, Liverpool
90 cks, order, Hibernian, Liverpool
257 cks, order, Palestine, Liverpool
CALCIUM CHLO—42 dms, order, Catalonia, Liverpool
CHALK—600 tons, F E Brugman & Co, Genoa, London
CHINA CLAY—350 cks, Hammill & G, Hibernian, Liasgow
COLORS—8 cs, J A & W Bird & Co, Hermann, Antwerp
3 cks, J A & W Bird & Co, Catalonia, Liverpool
FUSTIC—5 tons, order, Edward H, Milk River, Ja
EXT—25 cks, Baring Bros, Norseman, Liverpool
GELATINE—15 cks, S S Pierce & Co, Catalonia, Liverpool
GINGER—1,474 bgs, J F Brooks, Waldemar, Sierra Leone
GLASS PLATE—7 cs, Hills, T & Co, Hermann, Antwerp
WINDOW—3,591 cs, Wise, M & Co, Hermann, Antwerp
6,406 cs, Lambert Bros, Hermann, Antwerp
12,765 cs, R Sherburne, Hermann, Antwerp
1,500 cs, N Farnham & Co, Hermann, Antwerp
11,790 cs, Hills, T & Co, Hermann, Antwerp
1,252 cs, order, Hermann, Antwerp
GREASE—10 cks, A J Foster & Co, Hibernian, Liverpool
33 cks, Baring Bros, Catalonia, Liverpool
48 cks, C W Geiler, Catalonia, Liverpool
LOGWOOD—221 tns, order, Edward D, Milk River, Ja
MADDER—5 cks, order, Hermann, Antwerp
OIL—5 cks, Whitney, P & Co, Halifax, Halifax
SHELLAC—5 cs, Merrill, D & Co, Catalonia, Liverpool
SODA ASH—41 cks, order, Norseman, Liverpool
360 bgs, 218 tcs, order, Hibernian, Liverpool
89 cks, order, Palestine, Liverpool
72 pgs, order, Catalonia, Liverpool
218 cks, 360 bgs, Linder & M, Bostonian, L'pool
66 cks, 640 bgs, Linder & M, Venetian, L'pool
CARB—112 bbls, order, Catalonia, Liverpool
CAUSTIC—200 dms, E & F King & Co, Norseman, L'pool
200 dms, order, Norseman, Liverpool
250 dms, order, Palestine, Liverpool
SAL—167 bbls, E & F King & Co, Norseman, Liverpool

## IMPORTS AT MONTREAL.

Week ending August 23, 1889.

ALUM—39 bbls, order, Waverly, Liverpool
25 bbls, C McCallum, Waverly, Liverpool
BLEACH—22 cks, order, Waverly, Liverpool
BORAX—3 cks, C McCallum, Waverly, Liverpool
5 kgs, E Adams & Co, Toronto, Liverpool
CEMENT—100 bbls, Munderloh & Co, Celia, Antwerp
2,000 cks, order, Celia, Antwerp
600 cks, B & S H Thompson, Canadian, London
450 cks, W & F P Currie & Co, Canadian, London
CHEMICALS—20 bbls, J Forman, Waverly Liverpool
3 cs, Lyman Sons & Co, Celia, Antwerp
CLAY—17 cks, Drummand, McCall & Co, Toronto, Liverpool
COLORS—5 cks, Dom Oil Cloth Co, Celia, Antwerp
13 cks, R Jamelson & Co, Celia, Antwerp
7 cks, order, Celia, Antwerp
COPPERAS—10 bbls, E Adams & Co, Toronto, L'pool
COPPER SULPHATE—1 ck, A Gunn & Co, Toronto, L'pool
EPSOM SALTS—25 bbls, C McCallum, Waverly, Liverpool
LITHARGE—8 cks, Fergusson, Alexander & Co, Waverly, L'l
LOGWOOD—100 bgs, Corticelle Silk Co, Waverly, Liverpool
100 bgs, E F Moseley & Co, Waverly, Liverpool
100 bgs, Streetsville Woolen Co, Waverly, Liverpool
MAGNESIUM CHLORIDE—50 dms, order, L Winnipeg, L'pool
OIL CASTOR—50 cs, order, Waverly, Liverpool
15 cs, order, Toronto, Liverpool
POTASH BICHRO—10 cks, J Forman, Norwegian, Glasgow
SALTPETER—15 kgs, C McCallum, Waverly, L'pool
SODA ASH—27 tcs, Scotstown C P & P Co, Waverly, Liverpool
97 cks, order, Waverly, Liverpool
BICARB—150 kgs, Bellhouse, D & Co, Waverly, L'pool
50 kgs, C McCallum, Waverly, Liverpool
BICHRO—10 cks, Bellhouse, D & Co, Norwegian, G'gow
CAUSTIC—50 dms, order, Waverly, Liverpool
50 dms, order, Waverly, Liverpool
100 dms, order, Waverly, Liverpool
CRYSTALS—6 cks, order, Waverly, L'pool
TIN CRYSTALS—3 kgs, order, Waverly, L'pool
WHITE LEAD—20 bbls, B & S H Thompson, Celia, Antwerp
40 cks, order, Celia, Antwerp
5 cks, order, Canadian, London
WHITING—170 cks, W & F P Currie & Co, Canadian, London
1,180 cks, order, Canadian, London

## IMPORTS AT CHARLESTON.

For week ending Aug. 24.

GLUE—30 cs, W M Bird & Co, L Monarch, London
KAINIT—448 tns, W Roach & Sons, Samuel Ohlrich, Hamburg
POTASH MURI—100 tns, H F Sweeney, S Ohlrich, Hamburg

## IMPORTS AT BALTIMORE.

For week ending Aug. 22.

BARK—10 cs, Maine, London
CEMENT—500 bbls, 2,527 cks, Maine, London
CLAY—451 tns, Maine, London
304 cs, Hermann, Antwerp
CORKS—30 bls, Maine, London
GELATINE—5 cks, Nessmore, Liverpool
MANURE SALTS—500 bgs, Hermann, Bremen
ROOTS—3 bgs, Maine, London
SODA—11 bgs, Maine, London
ASH—334 cks, Nessmore, Liverpool
226 cks, Wing & E, Mentmore, L'pool
SULPH—5 bbls, Peruvian, Liverpool

## IMPORTS AT NEW ORLEANS.

CEMENT—5,867 bbls, Havre, Antwerp
3,000 bbls, European, Bremen
4,999 bbls, European, London
CHEMICALS—16 cks, European, Bremen
80 cs, European, London
CORK—47 bls, European, London
DRUGS—41 cs, Mariner, Liverpool
GLASS WINDOW—250 cs, Havre, Bordeaux
GLYCERINE—31 cks, Havre, Havre
OCHER—10 pgs, Havre, Havre
OPIUM—19 cs, European, London
PAINT—50 dms, Mariner, Liverpool
PERFUME—11 pgs, Havre, Bordeaux
POTASH—103 cks, European, Bremen
SOAP—276 cs, Mariner, Liverpool
SODA ASH—500 cks, Mariner, Liverpool
50 cks, Wing & E, Mariner, London
CAUSTIC—50 dms, Mariner, Liverpool
50 dms, European, London
SAL—56 bbls, Mariner, Liverpool
VENETIAN RED—150 bbls, Andean, Liverpool
WASH BLUE—50 cs, Havre, Bordeaux
ZINC OXIDE—5 cks, Havre, Bordeaux

## IMPORTS AT PHILADELPHIA.

AMMONIA—49 cks, W W Fisher, Switzerland, Antwerp
CHEMICALS—63 cks, C Lennig & Co, Br Prince, L'pool
COLORS—3 cks, order, Switzerland, Antwerp
20 cs, H R Schultz, Switzerland, Antwerp
GELATINE—5 cks, Githens & R, Br Prince, L'pool
5 cks, H Kellogg & Co, Br Prince, L'pool
GLASS PLATE—4 cs, Bradley & Co, Br Prince, L'pool
WINDOW—350 cs, order, Br Prince, L'pool
24 cs, P Wright & Son, Switzerland, Antwerp
528 cs, J Munroe & Co, Switzerland, Antwerp
687 cs, order, Switzerland, Antwerp
OIL PALM—7 cks, order, Br Prince, L'pool
OTASH—85 cks, C Lennig & Co, Switzerland, Antwerp
50 dms, order, Switzerland, Antwerp
CARB—10 cks, order, Switzerland, Antwerp
CAUSTIC—120 dms, order, Switzerland, Antwerp
SODA ASH—35 tcs, Cooper, S & Co, Br Prince, L'pool
300 tcs, Wing & E, Br Prince, L'pool
236 cks, Wing & E, Br King, L'pool
CAUSTIC—135 bbls, Pa Salt Mfg Co, Br Prince, L'pool
TURKEY RED—25 cks, R Shoemaker & Co, Br Prince, L'pool

## WITHDRAWALS FROM BOND.

| | |
|---|---|
| Aniline colors, pgs | 192 |
| Bay rum, pgs | 5 |
| Caramel, cks | 15 |
| Corks, bls | 23 |
| Dextrine, bgs | 100 |
| Glass, window, cs | 2,485 |
| Glycerine ref, dms | 15 |
| Indigo ext, cs | 2 |
| Licorice paste, cs | 155 |
| Matches, cs | 245 |
| Oil codliver, bbls | 73 |
| Oil peppermint, cs | 20 |
| Opium, cs | 27 |
| Poppy seed, bgs | 100 |
| Potash, chlo, kgs | 20 |
| Saltpeter, bgs | 311 |
| Soap castile, cs | 500 |
| Soda caustic, dms | 200 |
| Sponge, bls | 65 |

## NEW YORK DOMESTIC RECEIPTS

For week ending Aug. 26.

ALCOHOL—390 bbls, J A Webb & Son, Penn RR
585 bbls, J A Webb & Son, B & O RR
BEESWAX—2 pgs, order, str, Galveston
2 pgs, order, str; Charleston
2 pgs, order, New Orleans
13 pgs order, str, Wilmington
1 pg, order, E Everett, str, New Orleans
2 pgs, J K Cilley & Co, str, Richmond
1 pg, Belt & B, str, Richmond
3 pgs, forward, str, Wilmingtn
4 pgs, order, str, Richmond
4 pgs, Wait, C & M, str, N O
BONES—24 hhds, Lister Bros, str, N O
BORAX—120 bgs, F M Smith, str, S F
CLAY—50 cks, Sergeant Bros, str, Pt Royal
148 cks, order, str, Charleston
FUSTIC—3,775 pcs, Coombs C & E, str, Gal
GLUE—100 bbls, A H Coddington, str, S F
GREASE—57 pgs, Fayerweather & L, str, Richmond
278 pgs, order, N R boats
7 pgs, order, Penn RR
15 pgs, order, H R RR
41 pgs, J H Welch, Penn RR
23 pgs, Davis Oil Co, L V RR
6 pgs, Kuh & T, M RR of N J
67 pgs, Kuh & T, Penn RR
16 pgs, S & S, Penn RR
23 pgs, H W Calef, str, Richmond
4 cs, order, D, L & W RR
HIGHWINES—200 bbls, Curtiss & Co, Penn RR
195 bbls, J A Webb & Son, Penn RR
390 bbls, G W Kidd & Co, D L & W RR
132 bbls, J L Hasbrouck & Sons, D L & W RR
65 bbls, D T Mills, Penn RR
40 bbls, Ross & K, Penn RR
LEAD—6,414 pigs, E Brush, str, Richmond
5,720 pigs, Brooklyn W L Co, str, Richmond
1,042 pigs, Tatham Bros, Erie RR
375 bbls, G W Clark, str, Richmond
OIL COTTONSEED—500 bbls, Am Oil Co, str, Galveston
800 bbls, Am Oil Co, N R boats
17 bbls, order, N R boats
214 bbls, Hopkins, D & Co, str, Richmond
LARD—120 bbls, various, H R RR
51 bbls, order, H R RR
60 bbls, N K Fairbank & Co, H R RR
112 bbls, N K Fairbank & Co, D L & W RR
LUB—142 bbls, order, H R RR
60 bbls, order, N Y W S & B RR
60 bbls, order, Erie RR
60 bbls, various, H R RR
CAKE—150 bgs, Simmonds & G, Penn RR
OLEO STOCK—60 pgs, Armour & Co, D, L & W RR
225 pgs, Armour & Co, N Y, O & W RR
130 pgs, order, D, L & W RR
60 pgs, order, B & O RR
PHOSPHATE ROCK—2,414 bgs, J W Wilson, str, Pt Royal
PITCH—15 bbls, order, str, Wilmington
ROSIN—120 bbls, G Potter & Co, str, Fernandina
19 bbls, G Potter & Co, str, Brunswick
164 bbls, G Potter & Co, str, Charleston
855 bbls, Paterson, D & Co, str, Brunswick
600 bbls, Paterson, D & Co, str, Savannah
150 bbls, Paterson, D & Co, str, Richmond
280 bbls, Dutton & W, str, Savannah
912 bbls, forward, str, Savannah
221 bbls, forward, str, Richmond
19 bbls, order, str, Savannah
10 bbls, order, str, Charleston
99 bbls, order, str, Wilmington
1,075 bbls, Murchison & Co, str, Savannah
769 bbls, M W Larendon, str, Savannah
648 bbls, J Turton's Sons, str, Savannah
329 bbls, F W Blossom, str, Savannah
69 bbls, Z Mills, str, Charleston
100 bbls, R H Overton, str, Richmond
252 bbls, Welch, H & Co, str, Savannah
164 bbls, F W Blossom, str, Richmond
70 bbls, G W Bailey & Co, str, Richmond
SAFFRON—90 bls, J W Wilson & Co, str, Gal
STARCH—100 pgs, order, H R RR
STEARINE—225 tcs, N K Fairbank & Co, H RR
92 tcs, Bucker & L, Penn RR
59 tcs, J Cinnamon, B & O RR
SUMAC—110 bgs, F R Leonori & Co, str, Rich
TALLOW—74 pgs, G Vandenhove, N R boats


NEW YORK, August 21, 1889.
73 William Street.

I to-day offer the following, out of my extensive line, for specially advantageous quotation.

*Acid, Benzoic.* *Aloin, G. P.* *Paraldehyd.*
*Acid, Phosphoric.* *German Tinctures.* *Resorcin.*
*Acid, Salicylic.* *Lithium Salts.* *Salol.*
*Atropine.* *Morphine Sulph.* *Terpin Hydr.*

A full line of **GUARANTEED REAGENTS.**

E. MERCK.

This style of bottle adopted for American market in **1869.**

## FIRST ORDER OF MERIT

**Awarded to Leopold Hoff of Hamburg,**

**at the Melbourne, Australia Exposition, 1889 for Quality and Excellence of his Malt Extract.**

This original article can only be obtained in the United States under label of

# HOFF'S MALT EXTRACT--TARRANT'S

**THE ORIGINAL.**
Introduced into the U. S. by Leopold Hoff, **1866.**

**THE IMPORTED.**
Imported by Tarrant & Co., per S.S. Hamburg-Am. Packet Co., since **1869.**

**THE GENUINE.**
Manufactured to-day in the same factory and by the same party as in **1866.**

**Is invariably put up in the special green bottle as per cut; it has a German caution label printed in red on the back of each bottle and is never sold in the U. S. in any other style of package.**

## CAUTION.

**Beware of a substitute article for which preposterous claim of originality is made, by a concern which has assumed the name Johann Hoff and which dates back only to 1880, eleven years after we became the Agents for and Importers of the original Hoff's Malt which is now sold as**

# HOFF'S MALT EXTRACT-TARRANT'S.

**TARRANT & CO.,**
Sole Agents and Importers,
**278, 280, 282 Greenwich Street,**
**NEW YORK.**

ESTABLISHED 1834.


13 pgs, A Churchman, N R boats
23 pgs, C S Higgins & Co, D, L & W RR
194 pgs, order, N R boats
8 pgs, order, C RR of N J
10 pgs, order, H R RR
5 pgs, order, L V RR
28 pgs, order, Penn RR
2 pgs, order, Erie RR
60 pgs, Link & Bro, D, L & W RR
2 pgs, F H Leggett, N Y, O & W RR
120 pgs, N K Fairbank & Co, B & O RR
113 pgs, Welch, H & Co, N R boats
11 pgs, J H Welch, H R RR
10 pgs, B T Babbitt, N Y, O & W RR
19 pgs, Kuh & T, N Y, W S & B RR
25 pgs, H W Calef, L V RR
11 pgs, Kuh & T, N R boats
25 pgs, H W Calef, N R boats
9 pgs, H W Calef, H R RR
15 pgs, H W Calef, D, L & W RR
13 pgs, Ferris & K, H R RR
19 pgs, Welch, H & C, H R RR
3 pgs, S & S, H R RR
54 pgs, G Vandenhove, D, L & W RR
16 pgs, G Vandenhove, Vt C RR
8 pgs, order, Vt C RR
TAR—6 bbls, Z Mills, str, Richmond
18 bbls, W H Wiggins, str, Richmond
350 bbls, forward, str, Wilmington
420 bbls, order, str, Wilmington
2 bbls, F W Blossom, str, Savannah
SPTS TURP—43 bbls, G Potter & Co, str, Bruns
20 bbls, G Potter & Co, str, Charleston
20 bbls, G Potter & Co, str, Wilmington
399 bbls, Paterson D & Co. str, Brunswick
81 bbls, forward, str, Savannah
175 bbls, forward, str, Wilmington
200 bbls, Dutton & W, str, Savannah
16 bbls, Z Mills, str, Charleston
49 bbls, order, str, Charleston
426 bbl order, str, Wilmington
355 bbls, Tolar H & Co, str, Richmond
157 bbls, G W Bailey & Co, str, Richmond
3 bbls, Hueston & Co, str, Richmond

### SAVANNAH DOMESTIC RECEIPTS

For week ending Aug. 24.

CEMENT—50 bbls, C & S RR
CLAY—48 cks, C RR
COTTONSEED—112 sks, S, F & W RR
FERTILIZERS—535 sks, S, F & W RR
GLUE SCRAP—10 bxs, C & S RR
GUANO—1 car, C RR
OIL—20 bbls, C RR
PAINT—10 cars, S, F & W RR
POTASH—25 bxs, C RR
1 bx, C & S RR
ROSIN—12,440 bbls, S, F & W RR
95 bbls, C & S RR
3,879 bbls, C RR
SOAP—3 bxs, S, F & W RR
3 cs, C RR
STARCH—7 bxs, C RR
TURPENTINE SPIRITS—4,131 bbls, S, F&WRR
22 bbls, C & S RR
784 bbls, C RR
CRUDE—104 bbls, S, F & W RR
WAX—10 cks, 1 pg, C RR
5 pgs, S, F & W RR

### BOSTON DOMESTIC RECEIPTS

For week ending Aug. 24.

GREASE—81 bbls, B & A RR
136 bbls, 15 pgs, B & M RR
13 bbls, 848 pgs, by sea
54 bbls, O C RR
37 bbls, F RR
28 bbls, 32 pgs, B & P RR
27 bbls, N Y & N E RR
TALLOW—1 bbl, B & P RR
90 bbls, 12 pgs, B & M RR
42 bbls, O C RR
20 bbls, B & A RR
64 bbls, F RR

### NEW ORLEANS DOMESTIC RECEIPTS.

For week ending Aug. 23.

ALCOHOL—65 bbls, Ill C RR
BEESWAX—4 bbls, 4 sks, T & P RR
BONES—54 sks, Shreveport
CLAY—500 bbls, Mobile
COTTONSEED—1,639 sks, Grand Lake
91 sks, Bosco Belle
25 sks, Bayou Sara
379 sks, Shreveport
MEAL—50, 20 sks, L, N O & T RR
FERTILIZERS—28 cars, N O & N E RR
GASOLINE—1 car, N O & N E RR
1 tank, L, N O & T RR
GLASS WINDOW—1 car, N O & N E RR
GLUCOSE—200 bbls, L, N O & T RR
50 bbls, Ill C RR
3 cars, N O & N E RR
GREASE, LUB—300 cs, L & N RR
LEAD—13 pigs, St Louis
NAPHTHA—1 tank, L, N O & T RR
OIL—200 bbls, T & P RR
80 bbls, St Louis
2 tanks, 5 cars, L, N O & T RR
15 cars, N O & N E RR
50 cs, 47 bbls, S P RR
CAKE—1,500 sks, T & P RR
PAINT—94 pgs, St Louis
PLUMBAGO—200 sks, T & P RR
ROSIN—1,080 bbls, Mobile
14 cars, N O & N E RR
SOAP—1,000 bxs, Ill C RR
STOCK—114 bbls, T & P RR
STARCH—1 car, N O & N E RR
TALLOW—5 hf bbls, S P RR
TURPENTINE—10 bbls, Mobile
4 cars, N O & N E RR
WAX—1 pg, Washington

### WILMINGTON DOMESTIC RECEIPTS

For week ending August 23.

ROSIN—4,517 bbls, Inland
TAR—921 bbls, Inland
TURPENTINE SPIRITS—1,915 cks, Inland
CRUDE—674 bbls, Inland

### CHARLESTON DOMESTIC RECEIPTS

For week ending August 23.

CLAY—94 cks, S C RR
PHOSPHATE ROCK—20 cars, N & E RR
32 cars, C & S RR
ROSIN—1,057 bbls, S C RR
187 bbls, C & S RR
460 bbls, N E RR
SPTS TURP—399 cks, S C RR
37 cks, C & S RR
177 cks, N E RR

### EXPORTS FROM NEW YORK FOR THE WEEK ENDING AUG. 26.

ACID
2 cbys $7 Manhattan, Cienfuegos
100 cbys $400 Sunlight, Georgetown
100 bxs $550 Newport, Amapola
3 bxs $24 Newport, Colon
20 bxs $44 E Hough, Ciudad Boliver
10 dms $122 Cienfuegos, Vera Cruz

ACID MURIATIC
50 cbys $186 Mendoza, Havana
2 cbys $9 Arcot, Gibara

ACID SULPHURIC
2 cbys $10 Alice, Nuevitas
10 cbys $43 Cairngorm, Pto Cabello
150 cbys $533 Mendoza, Havana
6 cbys $28 E Hough, Pt Spain
3 cbys $12 Soldier Prince, Mayaguez
100 cbys $343 Mendoza, Havana
5 cbys $22, E Hough, Trinidad

ALCOHOL
2,777 gls, $1,520 Hondo, Livingston, etc

AMMONIA
20 dms $2,000 Thetis, London

AMMONIA SAL
1 bbl $21 Habana, Havana

BARK EXTRACT
1 ct $10 Werra, Bremen
62 bbls $444 Thetis, London

BENZINE
344 gls $54 J H Ingersoll, Cape Town

BORAX
1 bbl $29 Seneca, Havana

BRIMSTONE
5 bbls Caringorm, La Guayra
2 bbls $12 Miranda, St John, N F
6 bbls $36 Habana, Havana

CANDLES
67 pgs $559 Hondo, Livington
20 cs $50 Hondo, Greytown
20 cs $27 Hondo, Belize
5 bxs $7 Hondo, Pto Cortez
25 bxs $41 Cairngorm, La Guayra
40 cs $68 Cairngorm, Pto Cabello
12 bxs $23 Cairngorm, Curacoa
500 bxs $870 Soldier Prince, Mayaguez
10 bxs $19 Newport, Colon
2 cts $20 E Hough, Trinidad
50 bxs $95 Soldier Prince, San Juan, P R
2 cts $20 Soldier Prince, Arroyo
50 bxs $95 Soldier Prince, Ponce
25 bxs $50 Soldier Prince, St John P R
23 pgs 146 Craigside, Montevideo

CARBON
175 bbls $450 Bohemia, Hamburg

CASCARA SAGRADA
2 pgs, $46 Britannia, Marseilles
15 bls $300 Thetis, London
12 bls $150 Santiago, Hull
15 bls $300 C of Rome, Liverpool

CASCARILLA BARK
8 bbls $65 Britannia, Marseilles

CASSIA
2 bls $7 Cairngorm, La Guayra
3 bls $10 Cairngorm, Curacoa
2 bls $63 Sif, Pt de Paix
4 bls $12 Soldier Prince, Arecibo
10 bls $30 Soldier Prince, Arroyo
5 bls $16 Soldier Prince, Ponce

CEMENT
20 bbls $40 Thetis, London
350 bbls $642 Habana, Havana
70 bbls $170 Arcot, Gibara

CHALK
3 bbls $10 Cairngorm, Maracaibo

CINNAMON
1 bl $8 Cairngorm, Maracaibo

COPPER PAINT
310 gls $500 Buffalo, Hull
100 gls $140 Hekla, Copenhagen
40 gls $56 Habana, Havana

CUMMIN SEED
1 bg $9 Cairngorm, Curacoa

DIVI DIVI
25 bgs $60 Habana, Havana

DRY PAINT
1 bbl $5 Cairngorm, La Guayra
3 kgs $25 Newport, Colon
1 cs $7 Soldier Prince, Mayaguez

DYESTUFF
3 cs $203 S of Nebraska, Glasgow

DYEWOOD
10 bbls $99 Seneca, Havana

DYEWOOD EXTRACT
250 bxs $1,209 Britannia, Glasgow
2 bbls $33 Spain, Liverpool

EARTH PAINT
1 cs $45 R Hill, London
46 pgs $75 M Purdy, St John N B

ETHER
1 cs $30 Hondo, Pto Cortez

FLAVINE
20 bxs $300 Spain, Liverpool

GELATINE
5 cs $55 Thetis, London

GLUCOSE
275,173lb $5,909 R Hill, London
33,600lb $756 Jersey City, Bristol
48,000lb $1,080 Devonia, Glasgow
48,869lb $1,002 Erin, London

GLUE
2 bbls $92 Colon, Libertad
1 bbl $20 Cairngorm, Pto Cabello
1 bbl $34 Seneca, Havana
6 bbls $155 Erin, London
20 bbls $430 S of Nebraska, Glasgow

GOLD SIZE
3 bbls $86 S of Nebraska, Glasgow

GRAPE SUGAR
112,000lb $2,520 Llandaff City, Bristol
26,880lb $588 Devonia, Glasgow
560,000lb $3,360 Erin, London
22,400lb $490 C of Rome, Liverpool

GREASE
52,881lb $2,616 Taormina, Hamburg
9,500lb $750 Devonia, Glasgow
92,905lb $4,200 Britannia, Marseilles
3,778lb $88 [illegible] of Columbia, Glasgow
600lb $24 Spain, Liverpool
50lb $12 E Hough, Trinidad
9,707lb $400 Cienfuegos, Progreso
51,400lb $2,300 Rhaetia, Hamburg

GUANO
52 bgs $150 Amsterdam, Rotterdam

GUM
1 cs $10 Cairngorm, Curacoa

GUM ARABIC
6 bgs, Seneca, Havana

GUM DAMAR
2 cs $371 Seneca, Havana

HYPOPHOSPHATES
12 pgs $292 Cairngorm, La Guayra
18 pgs $588 C of Columbia, Havana
3 pgs $75 Newport, Lima

LAMPBLACK
1 bbl $7 Hondo, Greytown

LEECHES
10 cs $42 Cienfuegos, Progreso

LICORICE
27 cs $432 Thetis, London

LIME ACETATE
578 bgs $1,500 Bohemia, Hamburg
506 bgs $1,556 E Monarch, London

LIME BI-SULPH
2 bbls $12 Cienfuegos, Havana

LINSEED
5 bgs $25 Cairngorm, Maracaibo

LOGWOOD EXTRACT
200 bxs $870 Letimbro, Genoa

LUBRICATING GREASE
2,271lb $90 Manhattan, Guantanamo
2,480lb $66 S of Nevada, Glasgow
9,055lb $611 Seneca, Matanzas
2,240lb $58 Adventurer, Brisbane
11,304lb $1,500 Arcot, Gibara
4,650lb $55 Amsterdam, Rotterdam

MALT EXTRACT
17 cs $109 Miranda, St John, N F

LIME ACETATE
412 bgs $550 R Hill, London
1,385 bgs $1,819 Guido, L'pool
415 bgs $600 Hugo, L'pool

MATCHES
12 cs $105 Hondo, Greytown
1 cs $10 Hondo, Belize
20 cs $330 Cairngorm, Maracaibo
6 cs $85 Raleigh, St Pierre

OCHER
2 bbls $13 Sif, Gonaives

OIL ALMOND
6 cs $92 Cairngorm, La Guayra
10 cs $103 Cairngorm, Pto Cabello
2 bxs $31 Newport, Colon

OIL ANIMAL
100 gls $550 N Smith, Santos

OIL CAKE
1,023,134lb $12,903 Llandaff City, Bristol
432,730lb $5,612 Ptolemy, L'pool
310,738 $4,040 Buffalo, Hull
460,594lb $5,988 Devonia, Glasgow
704,213lb $8,987 Glenshiel, Glasgow
555,700lb $7,144 Erin, London
465,500lb $7,834 California, Glasgow
655,546lb $8,431 Thetis, London
146,280lb $1,802 Spain, Liverpool
111,675lb $1,500 Amsterdam, Rotterdam

OIL CASTOR
3 bbls $155 Cairngorm, La Guayra
1 bbl $47 Newport, Colon

OIL COCOANUT
239 gls $94 E Hough, Trinidad

OIL CODLIVER
40 gls $16 Hondo, Greytown
10 gls $32 A Victoria, Coquimbo
506 gls $193 Adventurer, Brisbane

OIL COTTONSEED
10 gls $5 Colon, San Jose
97 gls $84 Hondo, Kingston
30,000 gls $14,427 Buffalo, Trieste
250 gls $140 Adventurer, Brisbane
24,713 gls $12,000 Britannia, Marseilles
24,549 gls $12,000 Britannia, Genoa
14,961 gls $7,500 Santiago, Trieste
3,080 gls $1,049 Savona, Rio Janeiro
8,062 gls $4,282 Craigside, Buenos Ayres

OIL ESSENTIAL
5 cs $577 Aug Victoria, Hamburg
20 cs $1,323 Thetis, London

OIL FISH
20 gls $7 Manhattan, St Jago
3,750 gls $225 California, H'burg

OIL LARD
1,254 gls $677 Buffalo, Hull
10 gls $6 Cairngorm, Curacoa
400 gls $252 Itonius, Talcahuano
500 gls $293 Itonius, Valparaiso
250 gls $150 J H Ingersoll, Cape Town
3,488 gls $1,780 Jersey City, Bristol
20 gls $22 E Hough, Trinidad
2,027 gls $1,075 Cienfuegos, Vera Cruz

OIL LINSEED
20 gls $16 Hondo, Greytown
286 gls $182 Cairngorm, La Guayra
99 gls $62 Cairngorm, Maracaibo
92 gls $50 Sif, Pt de Paix
30 gls $20 Arcot, Gibara

OIL LUBRICATING
1,700 gls $65 Manhattan, Cienfuegos
1,500 gls $962 Savona, Rio Janeiro
49,750 gls $7,500 Ptolemy, Liverpool
43 gls $22 Hondo, Livingston
37,650 gls $8,300 La Champagne, Havre
9,614 gls $1,285, Buffalo, Hull
50 gls $13 Cairngorm, La Guayra
350 gls $156 Itonus, Talcahuano
3,000 gls $1,000 Itonus, Valparaiso
20 gls $11 J H Ingersoll, Cape Town
100 gls $30 Raleigh, St Pierre
1,408 gls $674 Seneca, Matanzas
1,262 gls $600 Devonia, Glasgow
1,597 gls $264 Adventurer, Brisbane
56,800 gls $7,592 Britannia, Genoa
1,199 gls $200 Britannia, Leghorn
303 gls $91 Britannia, Barcelona
10,000 gls $1,500 Erin, London
457 gls $195 Miranda, St John N F
3,000 gls $700 S of Nebraska, Glasgow
11,490 gls $1,020 Cufic, Liverpool
650 gls $272 C of Columbia, Havana
9,000 gls $1,000 R Hill, London
77,503 gls $11,883 Spain, Liverpool
64,667 gls $8,200 Bohemia, Hamburg
25 gls $25 Newport, Colon
760 gls $375 E Monarch, London
1,000 gls $225 Cienfuegos, Vera Cruz
5,120 gls $1,130 Craigside, Buenos Ayres

OIL MACHINE
1 cs $71 Seneca, Matanzas

OIL MEAL
9,025lb $140 Raleigh, St Pierre
31,250lb $450 E Hough, Trinidad

OIL OLEO
35,000lb $3,500 Amsterdam, Amsterdam
17,500lb $1,750 La Normandie, Havre
52,728lb $5,800 Bohemia, Hamburg
497,200lb $48,099 Amsterdam, Rotterdam

OIL PAINT
4 cs $24 Hondo, Pto Cortez

OIL PEPPERMINT
2 cs $500 Aurania, Liverpool

OIL RAPE SEED
2 cs $14 Cairngorm, La Guayra

OPIUM
1,375lb $3,470 Cienfuegos, Havana

PARAFFINE
2,506lb $110 Soldier Prince, Ponce

PARAFFINE WAX
88,150lb $4,500 Ptolemy, Liverpool
4,012lb $300 Buffalo, Hull
31,368lb $1,411 Taormina, Hamburg
41,947lb $2,192 Devonia, Glasgow
227,705lb $12,210 S of Nebraska, Glasgow
370,962lb $18,705 Bohemia, Hamburg
25,930lb $1,685 Cienfuegos, Vera Cruz

PEPPER
1 bg $10 Hondo, Livingston
1 bg $19 Hondo, Kingston
10 bls $148 E Hough, Cuidad Bolivar
10 bgs $140 Soldier Prince, San Juan, P R
2 bgs $29 Soldier Prince, Arroyo
25 bgs $437 Soldier Prince, Ponce

PHOSPHORUS
1 cs $74 Mendoza, Havana

PIMENTO
10 bgs $72 Hondo, Greytown
5 bgs $55 Cairngorm, La Guayra

PITCH
10 bbls $15 J H Ingersoll, Cape Town

POTASH
220 bxs $412 M Purdy, St John, N B
3 pgs $59 Habana, Havana

QUERCITRON BARK
1,076 bgs $1,285 La Champagne, Havre

QUICKSILVER
1 flk $57 Manhattan, Cienfuegos

RED LEAD
5 kgs $32 Cairngorm, Maracaibo
6 kgs $12 Arcot, Gibara

ROSIN
35 bbls $100 Alice, Nuevitas
294 bbls $1,330 Ptolemy, Liverpool
231 bbls $720 Cairngorm, La Guayra
10 bbls $21 Cairngorm, Maracaibo
10 bbls $27 Itonus, Talcahuano
210 bbls $575 Itonus, Valparaiso
20 bbls $45 Seneca, Havana
16 bbls $20 Taormina, Hamburg
250 bbls $330 Glenshiel, Glasgow
300 bbls $735 Adventurer, Brisbane
500 bbls $900 S of Nebraska, Glasgow
550 bbls $840 Thetis, London
10 bbls $20 Habana, Havana
16 bbls $73 Habana, Vera Cruz
50 bbls $200 N Smith, Santos
1,100 bbls $4,160 Craigside, Buenos Ayres

ROOTS
8 bls $525 Taormina, Hamburg
24 bls $192 Erin, London
10 bls $166 Belgenland, Antwerp

SARS PARILLA ROOT
6 bls $240 R Hill, London
7 bls $149 Britannia, Marseilles
2 bls $252 Britannia, Genoa
24 bls $240 Erin, London
24 bls $240 Erin London

SIMARUBA BARK
2 bls $50 Britannia, Marseilles

SENEGA ROOT
3 bbls $275 Nevada, Liverpool
5 bxs $113 Britannia, Marseilles
54 bls $2,917 Britannia, Genoa
15 bls $625 Thetis, London
39 bls $2,170 E Monarch, London

SILEX
400 bbls $1,000 M J Foley, Maceio

SOAP
3 pgs $73 Manhattan, Cienfuegos
1 cs $25 Manhattan, Santiago
83 bxs $303 Orinoco, Hamilton
10 bxs $33 Hondo, Pto Cortez
50 bxs $124 Buffalo, Hull
1 cs $5 Cairngorm, La Guayra
7 cs $56 Razoulo Io, Lisbon
1 pg $14 Seneca, Havana
50 bbls $500 Devonia, Glasgow
1,000 cs $500 Sif, Pt de Paix
4 cs $260 Adventurer, Brisbane
1 cs $122 Erin, Auckland
6 cs $440 Erin, London
1,299 bxs 5,036 Thetis, London
40 bbls $475 Spain, Liverpool
474 bxs $770 Newport, Panama
100 bxs $150 Newport, Colon
1 cs $37 Habana, Havana

SOAP STOCK
23,883lb $415 Seneca, Havana

SODA
2 bxs $43 Newport, Colon
4 kgs $15 Cienfuegos, Vera Cruz

SODA BICARB
2 kgs $9 Cairngorn, La Guayra
4 kgs $15 Cienfuegos, Vera Cruz
2 bxs $18 Newport, Amapola

SODA CAUSTIC
6 dms $106 Colon, Corinto
4 dms $50 Alice, Nuevitas
8 dms $122 Cairngorm, Maracaibo

SPERMACETI
244lb $56 Britannia, Marseilles
33,799lb $6,760 Erin, London
1,562lb $350 Ems, Bremen
12,800lb $4,350, E Monarch, London

SPONGE
15 bls $158 R Hill, London
7 cs $330 Erin, London

STARCH
7 pgs $23 Orinoco, Hamilton
10 bxs $12 Soldier Prince, Arroyo

STEARINE
83,511lb $3,650 Britannia, Marseilles
11,563lb $635 Habana, Vera Cruz
4 0lb $45 Habana, Tuxpan
231,740lb $10,750, E Monarch, London

SULPHUR
10 bbls $46 Miranda, St John, N B

TALLOW
18,346lb $900 Colon, Crinto
132,000lb $6,600 Ptolemy, L'pool
12,050lb $570 La Champagne, Havre
444lb $23 Cairngorm, La Guayra
822lb $45 Cairngorm, Maracaibo
21,046lb 1,800 Devonia, Glasgow
73,500lb $3,675 Britannia, Genoa
107,748lb $4,880 Guido, L'pool
28,165lb $1,300 Olbers, L'pool
9,200lb $425 Letimbro, Genoa
24,244lb $1,177 Habana, Vera Cruz
59,464lb $2,512 Santiago, Hull
60,228lb $2,994 Cienfuegos, Vera Cruz
620lb $38 Soldier Prince, Mayaguez
282,200lb $11,288 Adam, R'dam

TALLOW SCRAPS
94,609lb $1,597 Erin, London

TAR
5 bbls $18 Hondo, Belize
5 bbls $28 Cairngorm, Maracaibo
13 pgs $15 Seneca, Havana
5 bbls $17 Habana, Tuxpan
5 cs $108 Habana, Havana
5 bbls $20 Arcot, Gibara
17 cs $30 Cienfuegos, Havana
5 bbls $27 Cienfuegos, Vera Cruz
100 bbls $277 Tentative, St Paul de Loanda

TURMERIC
4 bbl $30 Manhattan, St Jago

TURPENTINE
250 gls $125 Sunlight, Georgetown
40 gls $36 Hondo, Greytown
50 gls $24 Cairngorm, Pto Cabello
214 gls $104 Cairngorm, La Guayra
300 gls $134 Itonus, Talcahuano
1,000 gls $431 Itonus, Valparaiso
902 gls $524 J H Ingersoll, Cape Town
563 gls $247 Seneca, Havana
46 gls $18 Sif, Pt de Paix
1,920 gls $820 Adventurer, Brisbane
2,200 gls $1,008 Akbar, Montevideo
31 gls $19 Newport, Colon
455 gls $213 Habana, Havana
20 gls $9 Arcot, Gibara
500 gls $225 N Smith, Santos
102 gls $44 E Hough, Trinidad
1,080 gls $623 Cienfuegos, Havrna
100 gls $50 Soldier Prince, Mayaguez
200 gls $94 Soldier Prince, Ponce
500 gls $20 Tentative, St Paul de Loanda

VARNISH
640 gls $625 Serene, Pt Natal
20 gls $20 Hondo, Belize
10 gls $21 Hondo, Greytown
36 gls $30 Werra, Iquique
62 gls $53 Cairngorm, La Guayra
30 gls $25 Cairngorm, Maracaibo
240 gls $339 Itonus, Talcahuano
200 gls $810 Amsterdam, A'dam
10 gls $8 Soldier Prince, Mayaguez
24 gls $29 Adventurer, Brisbane
40 gls $45 Akbar, Montevideo
234 gls $281 Saale, Yokohama
579 gls $355 Thetis, London
330 gls $387 Ems, Yokohama
140 gls $153 Newport, Callao
30 gls $60 Newport, Colon
214 gls $183 Habana, Havana
250 gls $237 Cienfuegos, Vera Cruz
130 gls $91 Cienfuegos, Havana
48 gls $50 Soldier Prince, Mayaguez
1,473 gls $1,815 Adam, R'dam

VASELINE
2 cs $84 Hondo, Greytown
1 cs $10 Cairngorm, La Guayra
163 cs $2,415 Richmond Hill, London
1 cs $30 Seneca, Havana
5 cs $60 Adventurer, Brisbane
1 cs $40 E Hough, Trinidad
1 cs $10 Soldier Prince, St John P R
5 cs $194 Savona, Rio Saneiro

WAX
11,955lb $340 Llandaff City, Bristol
4,108lb $785 Spain, L'pool
13,280lb $400 E Monarch, London

WHALEBONE
528lb $1,796 La Normandie, Havre

WHITE LEAD
4 cs $20 Hondo, Greytown
1 cs, $8 Cairngorm, Maracaibo
6 kgs $11 Arcot Gibara

WHITING
5 bbls $11 Cairngorm, Pto Cabello
4 bbls $12 Cairngorm, La Guayra
6 bbls $17 Seneca, Havana
8 bbls $19 Seneca, Matanzas

## New York to San Francisco.

Per Am. str Colon. Aug. 20.
Earth Paint—4 pgs, $83
Oil Cottonseed—10 cs, $150
Oil Lard—1,000 gls $640
Oil Lub—400 gls $160
Spermaceti—2 cs, $50
Soap—325 cs, $2,234

## San Francisco Exports.

For week ending Aug 14.

CANDLES
20 bxs, City of Papeete, Tahiti
10 bxs, John Hancock, Ensenada

OIL LINSEED
100 gls, City of Papeete, Tahiti

OIL NUT
40 gls, John Hancock, Ensenada

OPIUM
11lb, John Hancock, Ensenada

PAINT
13 pgs, City of Papeete, Tahiti

SOAP
223 bxs, City of Papeete, Tahiti
51 bxs City of Papeete, Marquesas

WHITE LEAD
1,000lb, City of Patpeete, Tahiti

## Philadelphia Exports.

For week ending August 23.

BONEBLACK
10 bbls, Lord Gough, Liverpool

OIL LUB
220 bbls, Lord Gough, Liverpool

OIL CAKE
2,687 bgs, Lord Gough, Liverpool

SOAP
350 bxs, 20 cks, Rosarian, Glasgow

TALLOW
130 hhds, Lord Gough, Liverpool

## Baltimore Exports.

For week ending Aug 22.

BARK
249 bgs, Baltimore, Liverpool
754 bgs, Albano, Rotterdam
2,000 bgs, Alicia, Liverpool

BARK EXTRACT
250 bxs, Albano, Rotterdam
12 bbls, Lord O'Neill, Glasgow

LICORICE MASS
27,000lb, Missouri, London

OIL ANIMAL
451 gls, Cearance, Para

OIL FISH
49,716 gls, North Durham, Glasgow

# PURE ALKALI.

Manufactured by the Ammonia Process

BY

TRADE B.M&C.O MARK.

## BRUNNER, MOND & CO.,

LIMITED.

NORTHWICH, ENGLAND.

TRADE B.M&C.O MARK.

**THIS ALKALI contains 58.50 deg. Alkametrical Test and is the most Economical form of Soda** known for the manufacture of **Glass, Soap, Paper, Wood Pulp Starch or Colors.** And for **Cleaning Wool and Bleaching.** In fact, for any purpose where **Soda in its purest form** is required.

Its strength is uniform, and quality always the same.

**The following is the Chemical Analysis of this Alkali:**

| | |
|---|---|
| **Carbonate of Soda,** | **98.72 per cent.** |
| **Sulphate of Soda,** | **0.20 "** |
| **Chloride of Sodium,** | **0.54 "** |
| **Carbonate of Lime,** | **0.13 "** |
| **Carbonate of Magnesia,** | **0.04 "** |
| **Peroxide of Iron,** | **0.01 "** |
| **Alumina,** | **0.01 "** |
| **Silica,** | **0.09 "** |
| **Moisture,** | **0.26 "** |
| **Total,** | **100.00** |

We are in constant receipt of **BRUNNER, MOND & CO.'S** manufacture at **New York, Boston, Baltimore and New Orleans.**

We have appointed as Exclusive Sales Agent for their district,

**LINDER & MEYER, Boston, for New England States.**

We are prepared to make forward contracts for delivery monthly.

## WING & EVANS,

54 WILLIAM STREET, NEW YORK,

SOLE AGENTS FOR THE UNITED STATES

OIL LUB
10,292 gls, Hungaria, Hamburg
6,093 gls, Lord O'Neill, Belfast
OIL CAKE
74,810lb, Albano, Rotterdam
OLEOSTOCK
301,100lb, Albano, Rotterdam
25,502lb, Enrique, Liverpool
ROSIN
105 bbls, Enrique, Liverpool
STARCH
4,800 bxs, Albano, Rotterdam
STEARINE
57,000lb, Albano, Rotterdam

### Boston Exports.

For week ending Aug. 24.

ACID
300 cbys, Eldridge Souther, Demerara
AMMONIA
4 cbys, Yarmouth, Yarmouth
ASHES, ZINC
19 bbls, Istrian, Liverpool
BARK EXT
25 bbls, Roman, Liverpool
BONES
149 bgs, Roman, Liverpool
CANDLES
10 cs, North America, St Johns, N F
DYE
5 bxs, North America, St Johns, N F
25 bbls, Scandinavian, Glasgow
8 bbls, Carroll, Halifax
GLUCOSE
5 bbls, Carroll, Halifax
10 bbls, Halifax, Halifax
GLUE, FISH
66 pgs, Samaira, Liverpool
LOGWOOD
5 bbls, Maud Pye, Sackville
OIL
10 cs, North America, St Johns, N F
100 bbls, Scandinavian, Glasgow
OIL LUB
5 bbls, Carroll, Halifax
6 bbls, Maud Pye, Sackville
OIL CAKE
1,228 sks, Samaira, Liverpool
PAINT
8 bxs, North America, St Johns, N F
20 bxs, Serrano, Buenos Ayres
10 bxs, Istrian, Liverpool
PITCH
45 bbls, North America, St Johns, N F
ROSIN
11 bbls, North America, St Johns, N F
SOAP
20 bxs. North America, St Johns, N F
20 cs, Serrano, Buenos Ayres
STARCH
100 bxs, Serrano, Buenos Ayres
TALLOW
154 hhds, Roman, Liverpool
TURPENTINE SP
5 cs, North America, St Johns, N F
20 cs, Serrano, Buenos Ayres

### Charleston Exports.

For week ending Aug 23.

ROSIN
1,500 bbls, Voluna, London
SPIRITS TURPENTINE
1,440 cks, Langen, Hamburg
171 cks, Voluna, London

### Savannah Exports.

For week ending Aug. 24.

ROSIN
2,724 bbls, Zampa, Riga
3,031 bbls, Godeffroy, Riga
3,517 bbls, Birgitte, Stettin
SPIRITS TURPENTINE
1,454 bbls, Exquis, Antwerp
3,200 bbls, Freya, London

### New Orleans Exports.

For week ending Aug. 23.

ALCOHOL
10 bbls, Wanderer, Puerto Cortez
CANDLES
10 bxs, Wm G Hewes, Bluefields
LEAD
4,640 pigs, Editor, L'pool
OILCAKE
597 sks, Editor, L'pool
SOAP
47 bxs, Wm G Hewes, Bluefields
164 bxs, Wanderer, Puerto Cortez
331 bbls, Editor, L'pool

## GOODS ON THE WAY TO THE UNITED STATES BY SAIL.

### Calcutta

TO NEW YORK.

Lord Dufferin, 1,000 bgs cutch, 50 cs button lac 4,600 bgs saltpeter
Daniel I Tenney, 486 bgs saltpeter 3,500 bgs cutch, 100 cs button lac
Austriana, 2,498 bgs saltpeter, 2,706 bgs cutch
George Skolfield, 1,488 bgs cutch, 9,666 bgs linseed, 300 cs shellac
Anglo American, 2,933 bgs saltpeter, 4,998 bgs cutch, 240 cs button lac, 200 cs castor oil, 1,600 bgs ginger
Thiorva, 1,147 bgs saltpeter, 2,000 bgs cutch, 12,792 bgs linseed, 400 cs shellac
Sam Skolfield, 4,014 bgs cutch, 50 cs button lac, 400 bgs ginger
Assyria, 2,010 bgs saltpeter, 4,640 bgs, 3,250 cs cutch, 25 cs button lac, 500 cs castor oil, 1,424 bgs ginger

TO BOSTON

Patagonia, 1,316 bgs saltpeter

### Cirgenti

TO CHARLESTON

Ercole, 500 tons thirds brimstone

TO PHILADELPHIA

Navigatore, 800 tons thirds brimstone
Orsola, 700 tons thirds brimstone

TO SAVANNAH

Washington, 800 tons seconds brimstone

### Hiogo

TO NEW YORK

St James, 1,448 pcls camphor
Undaunted, 746 tubs camphor, 895 cs oil camphor, 300 cs wax, 500 cs oil fish
Eclipse, 1,466 pcls camphor, 999 tons brimstone, 100 cs vegetable wax, 125 cs oil camphor, 24 cs cuttlefish bone

### Hong Kong

TO NEW YORK

James G Bain, 250 pcls cassia, 140 cs essential oil, 117 cs gall nuts
Hallgerda, 1,000 pcls cassia, 650 cs Saigon cassia

### Licata

TO CHARLESTON

Emanuele, 500 tons seconds brimstone

### Singapore

TO NEW YORK

Liguri, 8,003 pcls gambier, 2,030 pcls sago flour, 1,681 pcls gum copal, 108 cs cutch
Elise, 11,774 pcls gambier, 1,268 pcls sago flour, 421 pcls tapioca flour, 2,246 pcls flake tapioca, 2,528 pcls black pepper, 253 pcls white pepper, 418 pcls pearl tapioca, 3,993 pcls gum copal, 419 pcls cube gambier
S R Lyman, 6,731 pcls gambier, 1,683 pcls black pepper, 849 pcls pearl tapioca, 844 pcls flake tapioca, 325 pcls gum copal, 90 cs essential oil

TO BOSTON

Thomas A. Goddard, 4,200 pcls gambier, 169 pcls Cube gambier, 336 pcls pearl tapioca, 169 pcls flake tapioca, 252 pcls black pepper, 51 pcls white pepper
Mystic Belle, 5,041 pcls gambier, 840 pcls sago flour, 211 pcls cube gambier, 169 pcls pearl tapioca, 168 pcls flake tapioca, 252 pcls black pepper, 35 pcls cutch

### West Coast South America

TO NEW YORK

Wachusett, bgs nitrate soda
Republic,——bgs nitrate soda
Minnie Brown,——bgs nitrate soda
Woon Sung.——bgs nitrate soda
Grandee,——bgs nitrate sada

TO HAMPTON ROADS

Heronimus,——bgs nitrate soda
McGilvery,——bgs nitrate soda

RECORD OF VESSELS.

| Port & Name. | Sailed. | Last Reported |
|---|---|---|
| *Calcutta.* | | |
| D I Tenney | May 8 | |
| Thiorva | May 10 | |
| Austriana | May 23 | |
| G W Skolfield | May 20 | |
| A American | May 23 | |
| Lord Dufferin | May 26 | |
| Sam Skolfield | May 30 | |
| Patagonia | June 24 | |
| Assyria | July 9 | |
| *Girgenti.* | | |
| Washington | June — | |
| Orsola | June — | |
| Navigatore | June — | |
| Ercole | July — | |
| *Hiogo.* | | |
| St James | April 18 | |
| Undaunted | May 13 | |
| Eclipse | June 30 | |
| *Hong Kong.* | | |
| J G Bain | June 22 | |
| Hallgerda | July 12 | |
| *Licata.* | | |
| Emanuele | July — | |
| *Singapore.* | | |
| Liguri | May 2 | |
| T. S. Goddard | June 3 | |
| Mystic Belle | June 28 | |
| Elise | July 3 | |
| S R Lyman | July 11 | |
| *W. C. South America.* | | |
| Heronimus | | |
| Wachusett | | May sailing |
| Republic | | May sailing |
| M Brown | | May sailing |
| Woon Sung | | May sailing |
| McGilvery | | |
| Grandee | | May sailing |

## On Dry Lubricants.

Owing to numerous inquiries we have received ragarding dry lubricants and their manufactures, we detailed a practical member of our staff to give the matter thorough investigation to the end that we may in the future be in a position to advise applicants as to the best methods of filling their special requirements.

It is almost needless to state that graphite forms the base of nearly all dry lubricants, and as many of the compounds now manufactured seem to us worthy of attention of our mining clients (under special circumstances), we will be glad to point out in which particular they can be properly utilized.

In preparing a compound which should so far reduce the friction between the moving surfaces of machinery as to render the use of ordinary lubricants necessary, it has been sought to combine four different properties:

1. A sufficient degree of coherence in the particles of the materials employed to prevent practically any change of form in them under the pressure to which they would be subjected.

2. So much facility of movement between the particles themselves as to prevent the development of heat to any injurious extent.

3. A sufficient degree of "fixedness" in the relative position of the particles, between them and the metal of the bearing, that adhesion to the latter shall not take place.

4. That the characteristics just enumerated should be so proportioned that little or no abrasion or wear of the shaft or journal should take place. After a close examination of three of the best known lubricant compounds, we find that all depend on a homogenous mixture, in which graphite is thoroughly mixed and evenly assimilated, so that every part of the wearing surface is constantly lubricated thereby. In each case this mixture is placed under the highest possible pressure, and as some of the fractures distinctly showed other mineral than graphite, it is reasonable to suppose that the softer metals,such as lead,antimony,and perhaps tin,are brought into use, and in higher pressure converted into a liquid state and completely assimilated with the graphite, which is naturally the base of the lubricating substance. To show that this is possible, we quote the following experiments made by Mr. W. Spring, a German chemist on the 'flow of solids."

"The substances experimented with were taken in the form of fine powder, and subjected, in a steel mold, to pressures varying from 2,000 to 7,000 at mospheres per square centimeter. Lead filings under a pressure of 2,000 atmospheres were transformed into a solid block, which no longer showed the least grain under the microscope, and density of which was 11·5, while that of ordinary lead is 11·3 only. Under 5,000 atmospheres the lead became fluid and ran out through the interstices of the apparatus. Toward 6,000 atmospheres, zinc and tin appeared to liquify.

"Powders of zinc and bismuth at 5,000 to 6,000 atmospheres became solid blocks of a 'crystalline' fracture. Powders of soft and of prismatic sulphur were transformed into solid blocks of 'octahedric' sulphur. Red phosphorus appeared to pass into the dense state of black phosphorus. Binoxide of manganese and the sulphides of zinc and lead in powder weld when compressed, and exhibit the appearance, respectively, of natural crystallized pyrolusite, blende, and galena."

"A number of pulverized salts solidify through pressure and become transparent' thus proving the union of the molecules."

Our intention is not to investigate the ingredients of the several compounds that are at present in the market, but is particularly for the benefit of our clients as regards the use they may be brought to, so we shall simply go into the past experience of others, who have utilized dry lubricants in their several callings. The longest periods for which journals have as yet been run in graphite mixtures—say ten years—have developed no heating or wear, if the bushings have been properly cleaned and the mixture replaced once in two or three years. A "shakeless fit" can be secured with the mixtures, which will render movement improbable with any mere interposed lubricant. Journals in most of these bearings, under the heaviest weight or at high rate of speed (as in polishing lathes), and even hot, as in the case of caldering and laundering rolls, or coffee-roasters, seem from inquiry to run perfectly dry the year round, without attention, without heating unduly or being injured by external heat, without perceptible wear or loosening, and with a usual reduction of power required, as compared with companion bearings running with oil under the same conditions.

We give as authority for these statements Messrs. Bagnall & Loud, the Boston manufacturers of Pulley blocks, who certify that their planing machine was fitted with dry bearings, and has run without interruption for from four to five years at a speed of about 5,000 revolutions per minute, averaging six or seven hours a day. In this case no oil has been used, and the shaft shows an excellent polish. This firm, so far as we learn, use a dry lubricant entirely for the thousands of pulley blocks they manufacture. Day, Farrington & Co., manufacturers, Brooklyn, have used dry brushes on their emery grinders, with heavy journals running 1,600 revolutions per minute, for upwards of three years, without oil or attention. "These journals," they have stated, "are a shakeless fit, and run cooler than other grinders running in oil." The Inman line of Atlantic steamships, we are informed, have used dry bearings in their wharf machinery with excellent results. The Excelsior Brick and Stone Company, Philadelphia, state that the dry bushings of their loose pulleys, 48 inch diameter, 12 inch face, 2⅞ inch bore, friction clutch, and running 225 revolutions a minute, were as good after four years as when first put in, and fit the shaft as well, having had no lubrication or attention whatever. Numerous steam laundries state that they have introduced dry bearings of different descriptions for the heated rolls of their ironing machines, resulting in complete relief from the constant difficulty, disadvantage and expense caused by such machinery running with oil. On Randall's Island, New York, the entire establishment is fitted with dry lubricants, and the Commissioners have much to say in their favor.

One of the most extreme pressures that could be placed on any lubricant was that to which the leading blocks were subjected in hoisting granite and iron during the construction of the New York and Brooklyn Bridge. We are informed that this work frequently caused a strain of four tons on a sheave. Before introducing a graphite lubricant, the bushing and hardened steel rollers of a patent sheave would be cut completely out in four or five days.

With the foregoing classification, in which dry-bearings seem to have given every satisfaction, we think our readers will be in a position to form a fairly accurate idea of what they can expect in filling their own special requirements. There are, however, two or three points which have to be considered. Our investigation shows us that all manufacturers claim duration of bushes and perfect coolness in the case of ordinary shafting and machinery; but so far as we have been able to satisfy ourselves in one particular as regards a lubricant that will resist external heat. This lubricant has, undoubtedly, proved its efficiency in the running of Jabez Burns & Sons' Coffee and Spice Mills. The coffee mill is also a roaster, in which the shafting comes into almost direct contact with the flame, and so highly does this firm hold the dry lubricant which they use that they state that without a commodity of that kind their invention would be of little value.

It therefore occurs to us that mines and smelting establishments would do well in considering the adaptability of graphite bearings for bullion-pots and slag-buggies. All concerned in such work are fully aware of the great waste of oil that occurs in lubricating externally heated axles. Then again with rollers for the support of "paddles" in the working of reverberatory furnaces,and the sliding of feed-doors in very many others. In fact, wherever high heat is detrimental to the ordinary lubricant, graphite in some shape is almost sure to correct the difficulty.

Again, in underground working, where hoisting appliances have to be carefully lubricated, graphite bearing may be considered as perfectly reliable, particularly in the case of guide-pulleys, and rollers on inclines, and over which wire ropes are run at a considerable speed, and when a jammed pulley or roller from want of attention, often causes the destruction of a sound and good rope. Also in the case of underground trucks,where so much waste in oil goes on in the dark during the greasing operation, and of which not so much as a spot remains to tell the tale of the continuous loss. In conclusion, we feel certain that many of our readers on considering their wants will find it to their advantage to look well into the matter of dry lubricants for special purposes, and we can only add that we will be most happy, if applied to, to assist and advise in the selection of such compounds as seem to us most suitable to do the work required of them.—*Engineering and Mining Journal.*

## The English Petroleum Markets.

London.—The demand continues steady, and, as is proved by the heavy deliveries almost daily, a large business is being done at tolerably good rates—American refined at 5⅞ @6¼d for present and future deliveries, and Russian oil at 5¾@6¼d per gallon. Petroleum spirit is held for more money, whilst other descriptions remain as previously quoted.

Petroleum Oil in London for the thirty-two weeks ended Aug. 12,with comparative stocks at that date:—

| | 1889. Bbls. | 1888. Bbls. | 1887. Bbls. |
|---|---|---|---|
| **LANDINGS.** | | | |
| Petroleum oil | 535,990 | 518,290 | 475,274 |
| Crude oil | 15,431 | 11,723 | 6,841 |
| Petroleum spirit | 16,089 | 16,959 | 21,314 |
| **DELIVERIES.** | | | |
| Petroleum oil | 474,338 | 434,512 | 407,821 |
| Crude oil | 15,417 | 10,438 | 7,993 |
| Petroleum spirit | 18,543 | 17,490 | 19,157 |
| **STOCKS.** | | | |
| Petroleum oil | 167,630 | 149,136 | 165,688 |
| Crude oil | 5,589 | 5,499 | 4,326 |
| Petroleum spirit | 2,539 | 5,982 | 4,454 |

Stock account of Petroleum Oil in London, issued by the Petroleum Association from returns made by the wharfingers, for the week ending Wednesday, August 14:—

| | Stock, Aug. 7. bbls. | Landed. bbls. | Total. bbls. |
|---|---|---|---|
| Dudgeon's | 28,668 | 12,280 | 40,948 |
| Palmer's | 43,396 | 3,100 | 46,496 |
| Rowatt's | 13,377 | .. | 13,377 |
| St. Leonard's | 29,571 | 4,754 | 34,325 |
| Thames Haven & Abbey Mills | 21,368 | ... | 21,368 |
| Atlantic | 23,215 | 6,752 | 29,967 |
| Totals | 159,595 | 26,880 | 186,481 |

| | Delivered. bbls. | Stock, Aug. 7. bbls. |
|---|---|---|
| Atlantic | 1,178 | 39,770 |
| Dudgeon's | 4,108 | 42,888 |
| Palmer's | 1,214 | 12,163 |
| Rowatt's | 2,134 | 32,191 |
| St. Leonard's | 1,505 | 19,833 |
| Thames, Haven & Abbey Mills | 2,255 | 27,512 |
| Totals | 12,424 | 174,057 |

Liverpool.—There is a quieter tone in this market, and business has been limited at about late rates for refined Pennsylvania at 6¼@6⅝d, and for Russian at 6@6¼d per gallon.—*London Grocer.*

## DRUG MARKET.

**Note**—*Our prices are for large lot except when otherwise specified, and buyers of small quantities must expec to pay an advance on these figures.*

*The prices current will be found on pages 49 and 50.*

TUESDAY EVENING, Aug 27, 1889.

Dealers generally report an active jobbing demand for drugs, mail orders particularly being liberal, and bearing out the impression that stocks in the interior have reached a low ebb. At the same time speculative interest is almost entirely withheld, quinine being about the only article on the list in which large buyers are disposed to operate. The steadily increasing demand all along the line has created a strong feeling which in some cases has resulted in higher prices. Mail advices from London to the 17th inst report a marked improvement in quinine and a firmer market for quicksilver and among other articles which were quoted higher there were camphor, musk and saffron; balsam copaiba, cloves and cocao butter were lower or easier.

The changes occurring in this market during the week were as follows:

| ADVANCED. | DECLINED. |
|---|---|
| Quinine, 2d hands, | Borax, |
| Ambergris, | Cantharides, |
| Oil sassafras, | Citric acid, |
| Oil wintergreen, | Ipecac, |
| Spanish saffron, | American saffron. |
| Shellac. | |
| Ginseng | |
| Cassia buds. | |

### Opium.

The opium market is very dull and this fact seems to have a somewhat depressing effect upon holders. While $3 25 is still quoted for standardized and has been paid in some instances for single cases, it is believed that $3 20 would buy from some dealers. On the other hand natural goods appear to be quite firm and we have heard of no concessions from our previous quotations of $3 30@3 50 as to test. No news has been received from Smyrna by cable so far as we have been able to learn, but mail advices report that market dull and unchanged, holders waiting for orders. It is expected that the Dutch Government will soon enter the Smyrna market for their usual supplies and this fact possibly has something to do with the firm front shown by holders there. As their prices are at present considerably above spot quotations it is hardly probable that any orders will go out from here until some concessions are made or this market reaches higher figures.

### Quinine.

Although the trade generally were disposed to await the result of the bark sale advertised to take place in London to-day, there has nevertheless been considerable speculative inquiry during the week and the consuming demand has been quite active. An advance at the bark sale was very generally expected as it was believed that the foreign manufacturers would have to buy freely in order to cover their sales for forward delivery. In this the trade were not disappointed, as the cable report of the sale stated that the buying was spirited, the bulk of the 500,000 lbs offered being sold at an average advance of 15%. The fact that great reluctance was shown by the receivers of cables to make public their contents until long after the time when such information is usually given out has served to throw some suspicion upon the accuracy of the reported results, and in some quarters the opinion is held that mail advices will make a different showing. Nevertheless, the reported advance at the bark sale had a decidedly stimulating effect. The manufacturers' agents either refused to quote or named prices about 2c above their former quotations, and displayed no anxiety to sell. Outside holders sought to obtain 28c for the leading brands and it is understood that several lots changed hands at that figure, though it was intimated that 27½c and possibly 27c would have been accepted by some holders, this afternoon, for favorite makes. At the close the market was in an unsettled and somewhat feverish state with the tendency, however, toward a higher range of prices, there being some talk even of 35c quinine. There is a report of limited circulation that the relations existing among the foreign makers are not so strained as they have been, and that a unification of interests is now within the range of possibilities. It is difficult to get at the quantity of quinine old since our last, but at least 120,000 ounces have changed owners, within the range of 25@28c, but it is probable that the total exceeds these figures. Of the quantity mentioned about 50,000 ounces changed hands to-day at 26@28c. The next sale of Java bark, in Amsterdam, will, we are informed by Messrs. Schroeter & Co., be held on September 5. Two hundred and sixty-four tons, representing 11,400 kilos, of quinine sulphate will be offered. Some extra rich bark, our correspondents state, contains 10% and over of sulphate of quinine.

| | |
|---|---|
| Receipts of quinine for the week..... | 25,000 |
| Since Jan. 1..... | 1,818,136 |
| Corresponding period last year .... ... | 1,154,200 |

### Miscellaneous.

Alcohol is unchanged. The demand continues brisk, and prices are maintained at $1 98 @2 08, as to quantity.


SULFONAL-Bayer

Manufactured by the

FARBENFABRIKEN, formerly Friedr. Bayer & Co.,

ELBERFELD.

*SULFONAL IS PROTECTED BY UNITED STATES PATENT AND TRADE MARK.*

August 1st, 1889. We quote: per oz

| | |
|---|---|
| Sulfonal-Bayer, in oz. bottles | $1.35 |
| In lots 25 ozs,, " " | 1.25 |
| " 100 " " " | 1.20 |

In ½ ounce bottles five cents per ounce additional.

We also prepare Tablets and Pills of Sulfonal-Bayer.

Phenacetine-BAYER.

Manufactured by the FARBENFABRIKEN, formerly FRIEDR. BAYER & CO., ELBERFELD.

**Phenacetine is protected by United States Patent and Trade Mark.**

We quote in

| | |
|---|---|
| 1 oz. bottles | $1.00 |
| In lots of 25 ozs.. | .95 |
| " " 100 ozs | .90 |

We prepare Pills of Phenacetine-Bayer containing 2 grs. 4 grs. and 5 grs. each.

W. H. Schieffelin & Co.,

170 & 172 William St., NEW YORK,

SOLE LICENSEES AND SOLE AGENTS FOR THE UNITED STATES.

NEW YORK

Quinine and Chemical Works, LIMITED

Office, 114 William St., New York.

MANUFACTURERS OF

QUININE, ACETANILID

MORPHINE

SANTONINE, ALOIN, COCAINE

STRONG COMPETITION

Has Resulted in Lowering The Quality of

Norwegian Cod Liver Oil.

The high standard of the "MALTESE CROSS" brand, however has been fully maintained and is still the finest quality that comes to this market.

SOLE IMPORTERS.

McKESSON & ROBBINS.

Price and Sample on Application.

ROSENGARTEN & SONS, 12 Gold Street New York.

MANUFACTURING CHEMISTS, Philadelphia.

| | | | |
|---|---|---|---|
| Quinine, Sulphate, Muriate. | Ammonium, Bromide, | Hypophosphites, |
| | Potassium, " | Subnitrate of Bismuth |
| Morphine, Sulphate, Acetate, Muriate. | SODIUM " | Spirits of Nitre, |
| | Nitrate of Silver, | C. P. Acids, |
| | Ammonia, | Tannin, |
| | | Resublimed Iodine. |

C. F BOEHRINGER & SOEHNE,

MANUFACTURING CHEMISTS.

Mannheim, Germany, and 49 Cedar Street, New York.

Sulphate of Quinine,

Acetanilid, [Antifebrin.]

Muriate of Cocaine, Boehringer.

WRITE FOR SPECIAL QUOTATIONS.

Frankfort o/M. ZIMMER & CO. GERMANY.

OFFER TO THE TRADE THEIR STRICTLY PRIME

QUININE

on spot and for future delivery, in quantities to suit at owest market quotations.

Represented by E. MERCK, 73 William St., New York.

CARBOLIC ACID

Liquid for Disinfecting.

All Strengths.

—MADE BY—

THE SCHOELLKOPF ANILINE & CHEMICAL CO.,

Buffalo, N. Y.

SOLE AGENTS:

Schoellkopf, Hartford & Maclagan,

Limited.

3 Cedar Street, New York.

Swan Brand.

(Trade Mark No. 9,113.)

Pure White

CASTILE SOAP.

Made in Italy out of the best quality of stock, equal to Contis brand, while the price is much lower.

GENERAL AGENTS FOR THE U.S.:

CODMAN & HALL, BOSTON, MASS.

FULLER & FULLER CO., CHICAGO. ILL

I. L. LYONS & CO., NEW ORLEANS, LA.

MOFFITT-WEST DRUG CO., ST. LOUIS MO

JAS. E. DAVIS & CO., DETROIT, MICH.

R. A. ROBINSON & CO., LOUISVILLE, KY.

LANGLEY & MICHAELS, SAN FRANCISCO CAL.

STALLMAN & FULTON, NEW YORK

Polar Star Norwegian Codliver Oil

FRENCH, RICHARDS & Co.

Proprietors of

PURE BUCK LEAD.

Philadelphia, Pa.

ROGERS & PYATT,

80 Maiden Lane, New York.

Manufacturers of

Bleached Shellac & Spirit Varnishes

Borax is offered at lower prices for forward delivery, refined or powdered, for arrival about the middle of next month, being quoted at 8¼@9c, as to quantity. Spot stock is extremely light, and small lots have been sold at 9⅝c.

Cantharides are easier but have met with no increased attention. We quote Russian at 95c @$1 05, as to quantity, and Chinese at 25@27c.

Citric acid was reduced 1c per lb late last Tuesday by the domestic manufacturers, their quotations now being 42½c. Foreign is offered at 42c. It is intimated that the reduction is due to an effort on the part of foreign manufacturers to get control of this market. The demand for the acid is very slow.

Civet is higher abroad and is firmly held at $3 here. Sales of 250 ozs. are reported.

Norwegian cod liver oil is receiving attention again and business in a moderate way is reported at $38@25 for prime, but there is some stock here that can be had for less.

Ergot is beginning to feel the effects of the continued strong advices from the other side, but no improvement in the demand is perceptible. For Spanish holders want 40@45c and German is held nominally at 30@32c, but it is thought that 29c would be accepted by one holder.

Glycerine is easier owing to increased competition and a lack of important demand, but there has been no quotable change in prices, although we hear of sales at 19c in drums.

Guarana is selling in a small way at $1 20@ 1 25 for whole and $1 30@1 35 for powdered. In large lots less might be accepted.

Hops are still tending downward but buyers continue to withhold their orders and very little business has been done since our last. The current quotations are as follows:

| | Cents. |
|---|---|
| State, 1888, best | 16 @17 |
| State, do., prime | 14 @15 |
| State, do., common | 10 @12 |
| State, 1887, best | 8 @— |
| State, do., good lots | 5 @— |
| California, 1888, choice | 14 @15 |
| Do. common and prime | 12 @13 |

Insect powder is still procurable at the range of 30@35c, and is moving rather slowly at that, notwithstanding the reported improvement in the flowers.

Iodide of potash manufacturers will not sell except in a small way, and to regular customers, owing to a similar reluctance manifested by the iodine makers. In speaking of the late decline, the *Chemist and Druggist* of London says there is a rumor current, which is given for what it is worth, that the Chilian nitrate producers outside the convention have resolved to turn out as much iodine as they can produce and throw it upon the market. It is said that Chili can now produce at least twenty times as much as has been sent out from there lately, and that if the outside producers stick to their intentions, the price may before long be down to 1½d or 1 d per oz.

Quicksilver is steady but there is not much demand. We quote 70@72c, as to quantity.

Tamarinds are easier, $2 25@2 50 as to quantity being named as acceptable by some holders.

### Balsams.

The market for balsam copaiba continues unsettled, with prices favoring the buyer. From first hands we note the sale of 2,000 lbs Contral American at 42c, but jobbers' prices are only ½@1c above this figure. Para and Maranham are held at 48@50c and Angostura at 60c. There has been a further arival of 78 casks of the last named grade, which is held at 45c by the importers. Balsam fir is held at $2 25 in Canada but $2 10 and probably less will buy here, the low prices named on the spot being made with a view to influencing the primary market, it is said. Balsam tolu is in fair request and we get sales of 1,500 lbs at 30@31c.

### Barks.

About the same general features are observable in the market for cascara sagrada as were observed at the date of our last. Buyers show little interest and we hear of but few sales, and none of any consequence. Holders on the Pacific Coast are very firm in their views and refuse to shade 8@8½c, New York, but here there is a willingness on the part of dealers to make sales even at concession, and the feeling at the close was easy. There has been some show of speculative interest during the past day or two, but it has come to nothing. The situation, as it appears at present, is discussed in our editorial columns this week. Of bitter orange peel there has been a further small arrival, amounting to 70 bags, which were sold to one jobber at 3@3½c. Other barks are without notable features.

### Beans.

In tonka beans there is a moderate demand. There has been some inquiry for Paras, which are still very scarce, and one holder disposed of his entire stock at $1. The quotation now is $1 10, but there is very little to be had even at this extreme figure. There is an active jobbing demand for vanilla beans, and prices are hardening. The new crop is held above buyers' views and nothing is being sold to arrive.

### Essential Oils.

Dealers report an increased movement into consumption all along the line of essential oils and prices have a steady support, though few quotable changes are noted.

For peppermint oil in bulk there is quite an active demand and we note sales of 4,000 lbs. western at $1 90@1 95. For prime western $1 85 is refused, though as low as $1 75 has been accepted for weedy oil. The export inquiry for case oil is increasing and a firmer feeling obtains notwithstanding an apparent effort to bear the market. Sales of 75 cases are reported at $2 55@2 60, but there is now little or nothing to be had at the inside figure.

Sassafras oil is advancing in consequence of the limited arrivals and the restricted spot supply in the face of a good consuming demand. We hear of two sales of 50 cans each at 44c and smaller lots at 45@46c, the general quotations being 45@47c as to quantity, though one holder named 43@45c this afternoon.

Wintergreen oil is now held at $1 90, though possibly $1 85 would still be accepted. The supply is very light and hardly any stock is coming forward from the interior.

### Flowers.

Lavender flowers are easier, good grades being now procurable at 5c. Insect flowers are higher abroad and firmer here, though a lot of half closed, about 2,500 lbs, is said to be procurable at 22c. New crop Roman chamomiles are arriving and prices are declining. On the spot they can be bought down to 23@25c, but much less will be accepted for stock to arrive. New German sell at a range of 20@27c, and old at 15@16c. Valencia saffron is advancing in consequence of the reported short crop. Prime is now held at $15 50@16 50, as to quantity and seller, with inferior grades at $14 50@15. American is easier. For single bales 25c has been accepted, and it is reported that less will buy in a large way.

### Gums.

For the mucilagineous gums there is more inquiry, senegals particularly being in request. We note sales of 100 bags senegal sorts at 26@28c and jobbing lots of picked at 43@45c. Advices of higher prices for tragacanths are still being received from abroad and this market is beginning to sympathize though there is no reportable change as yet. Camphor is quiet at the late decline to 31c in barrels and 32c in cases. Chicle is moving fairly and we note sales of 3,500 lbs at 37½c, larger lots however being procurable at 38c and possibly a shade less. Gamboge is scarce and firm at 55@60c for pipe as to quantity.

### Herbs and Leaves.

Trading is confined almost entirely to small lots but the tone of the market is firm. Tinnivelly senna of inferior quality is in plentiful supply and can be had at comparatively low prices, but prime is becoming very scarce, and commands full figures. Rose leaves are advancing abroad, prices there being equivalent to $1 50 laid down here. There is a good demand, and we note sales of 1,000 lbs pale buds and 1,000 lbs leaves. We quote the former at 30@40c, and the latter at 90c@$1 15.


# BERTRAND FRERES
## Essential Oils and Pomades.

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Famous Essential Oils
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CELEBRATED OLIVE OILS,
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EXTRA SUPERFINE OIL OF LEMON,
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Manufacturer of highly
"Concentrated Essential Oils, and Essences"
of high specific gravity, free from Hydrocarbon, readily soluble in dilute alcohol.
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BALLER'S OIL of LEMON.
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Oils of Bergamot and Orange.
Quality guaranteed equal to any brand.
Quotations and Samples furnished on application.
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W. H. B. White { put up in 2 lb. parcels in cases of 54 pounds. | W. H. B. Refined { in 2 lb cakes, in cases 130 lb 1 lb, ½lb, ¼lb, and oz. cakes.
The purity of these goods is certified to by the following eminent chemists:—S. P. Sharpless, State Assayer, Boston; J. W. Taylor, Associate of the Society of Public Analysis of Eng. Montreal, P. Q.; Edward Davis, F.C.S and F.I.C. and C., Royal Institution, Liverpool, Eng. Bernard Dyer, D. Sc., F.C.S., F.I.C., Member of the Society of Public Analysis, 17 Great Tower Street, London, E.C., Eng.: Wm. T. Wenzel, Analyst and Assayer, San Francisco, Cal.
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Vanilline Crystals
Is the Aromatic Principle of Vanilla Beans.
One ounce sent free to any part of the United States on receipt of $5.56.
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328 Sacramento Street, SAN FRANCISCO.
117 Boulevard Richard Lenoir, PARIS.

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ALL GRADES OF THIS ROOT:
WHOLE, CUT, CHIP, GROUND, SAWDUST and POWDERED
Importers and Manufacturers,
DODGE & OLCOTT,
NEW YORK.

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*MANUFACTURING AND IMPORTING CHEMISTS.*

Chloroform Purified, U.S.P.

Manufactured from Acetone, under U. S. patent No. 383,902

G. & S. Sulphate of Quinine.

Gold and Silver Brand guaranteed to test according to the U. S. Ph.

Dr. Seyferth's Acetanilid.

Four times more effective than Antipyrine.

OXALIC ACID, YELLOW PRUSSIATE of POTASH

*AND OTHER CHEMICALS FOR*

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Al Kinds of Loose Cap Bottle Stoppers.

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**Sprinklers, Catsup and Bitter Tubes**

Full Line of Sheet Metal, Cast and Spun Screw Caps for Screw Neck Bottle of kinds and for all purposes.

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# THE ONLY GENUINE IMPORTED
# JOHANN HOFF'S MALT EXTRACT

**Is Put up in Bottles as Per Cut Only.**

**ESTABLISHED SINCE 1847.**

Imported now in Boxes of 1 Doz. and 2 Doz. Bottles as well as in original Cases containing 100 Bottles each.

Fac-simile of Bottle.

Always specify "JOHANN" Hoff's, when ordering the GENUINE article.

**We always have, and shall continue to sell, the Only Genuine and Original**

**JOHANN HOFF'S MALT EXTRACT**

**which was introduced by Johann B. Hoff in 1847, who registered under the firm of "Johann Hoff," at Berlin in 1862, and who established branch Houses in Vienna and Paris, etc. He received in 1861 t e silver medal of the Society des sciences industrielles of Paris, for the excellency of his Malt Extract, and the gold medal of the Polytechnic Institute of Paris in 1862, AT WHICH TIME Leopold Hoff, who is now advertised through his agents as the "Originator" of "Hoff's" Malt Extract, and who has before the 1st of July, 1889, been proclaimed by the same house as the manufacturer of the "Only Genuine Johann Hoff's Malt Extract," was just 18 to 19 years old in accordance with his own testimony, and in the employ of Johann Hoff at his office in Vienna.**

## EISNER & MENDELSON CO.,

**Sole Agents for the Genuine Johann Hoff's Malt Extract,**

**6 Barclay St., New York.**

### Roots.

The market has been rather quiet since our last, as the leading descriptions are generally held at prices above buyers' views. Ginseng is higher and in better demand. We note sales of 3,000 lbs at 2 47½@2 50, the quoted range now being 2 40@2 60 as to quality. Blood root is offered from the country at 4½c, the nominal quotation here being 5½@6c. Golden seal is dull, the inquiry being wholly for small lots. Holders' views in the country are too high to admit of business and the spot quotations of 40@41c are above the ideas of large buyers. For a lot of 2,000 lbs 35c was offered and refused to-day. Ipecac is lower, being now procurable at $1 80@1 90 for whole and $1 00@2 00 for powdered. There is some inquiry for serpentaria but we hear of no business, buyers and sellers being apart in their views. Mexican sarsaparilla is quiet. Some off grade lots are offering at 5½c but for prime 5¾@6c is demanded by first hands. Honduras meets with increased attention, though prices appear to be tending in buyers' favor. We note sales of 15 bales at 24½c and 30 bales at 25@27c. The extreme range remains about as last noted. Jamaica ginger is very firm, choice grades being scarce with little or nothing remaining to be shipped from primary sources. Senega occupies the same position as when we last wrote.

### Shellac.

The market for shellac shows a decided upward tendency and prices are again reported higher. The demand continues, though the larger sales are principally on account of the leading dealers to fill up stocks. At the same time there is a very good demand from consumers, who, as a rule, confine their attention to small parcels. The reported transactions for the week amount to 800 cs composed of D. C., V.S.O. and S.D. marks. London reports by cable an active business and higher prices, and from Calcutta a decided upward tendency is reported by wire. The London market is being cleared of A, C. garnet, and it is reported that the buyers are the Calcutta manufacturers of that grade of shellac. At the close holders here quoted 29@30c for D. C., 24@25c for V.S.O. and Octagon B., 23@24c for Diamond I and S. D., 21@22c for S. S., 18@19c for natives, and 14½@15½c for garnet. Stocks of button are about exhausted and for the little remaining holders want 27@28c for No. 1 and 25c for No. 2.

### Spices.

There is an active jobbing demand for all descriptions but no important movement in any line. Mace, nutmegs and pepper are firm while cassia buds are tending upward and are now held at 12@12½c in a jobbing way. The secret tender sale of nutmegs in Amsterdam yesterday went off at an advance of 5@10%.

---

Mr. R. L. Iler, of Iler, Morris & Hibbard, Shreveport, La., has been in the city the past week.

The Schoellkopf Aniline and Chemical Company, of Buffalo, are now turning out a very fine quality of liquid carbolic acid, which is offered at prices that will command trade. Their agents in this city are Messrs. Schoellkopf, Hartford & Maclagan, from whom supplies may be obtained.

According to the Berlin correspondent of the *Chemist and Druggist*, Drs. Hagen and Huefler have just issued a report on a new hypnotic called chloralamide, which is stated to induce sleep immediately after taking. It was tried in twenty-eight cases, and was successful in twenty-six of them, no injurious secondary effects being observed.

Mr. M. Eisner, of the Eisner & Mendelson Co., returned last week by the Augusta Victoria from Carlsbad, where he was present at the taking of testimony in the suit of the City of Carlsbad vs. Carl H. Schultz. The testimony was one full of interest, and was taken in the presence of the newly appointed consul to Prague, Mr. Spooner, and conducted by Simon H. Stern of the New York law firm, Stern & Meyers, for the complainants, Mr. A. Knauth of Steele Van Briesen & Knauth, attorneys for the defendant. The Mayor of the City of Carlsbad gave his testimony as to the history of Carlsbad, dating as far back as 1370, and produced the original grants and patents given to the municipality by Charles IV., which were repeated and signed by Empress Maria Theresa in her own handwriting. The city proved beyond a doubt that the Carlsbad Sprudel Salt is a natural product evaporated from the Sprudel Spring, and not artificially prepared as asserted by the defendant.

### Perfumers' and Soap-Makers' Raw Materials.

As a general thing manufacturers of perfumes and soaps want their raw materials from first hands, and from parties who study their interests and who give special attention to that department. This is what Messrs. Leo Bernard & Co. have done ever since the firm was established, and more particularly at the present time, as the business has been greatly enlarged and the addition of more important foreign connections enables them to offer stocks of rare goods on advantageous terms. They import direct from the source of production, and, as our weekly list of imports will show, they handle an immense amount of perfumers' and soap-makers' raw materials. We believe that the purity of their essential oils has never been questioned, and this fact is made more apparent by their attitude on the adulteration question—being always opposed to sophistication in any form, and building a reputation on the merits of the goods. The house is constantly reaching out for new articles and endeavoring to please exacting buyers who can appreciate a good thing when they see it. With Mr. Leo Bernard in Paris and his energetic brother in New York, the fortunate patrons of the firm are certainly well taken care of.

### Boehringer's August Report.

Quinine.—Slowly but surely quinine is effecting a reliable recovery. Exports from Ceylon show a further decline. Up to the end of the third quarter of the present season they amount to

about 8,920,0 0 lbs.
against 10,096,000 lbs. in 1887-8
and 12,690,009 lbs. in 1886-7

The falling off in the arrivals at Colombo is even larger, the same being from October 1, 1888 to August 2, 1889 about 1,000 tons less than in the preceding year. The shipments from Java in July were also considerably smaller.

A noteworehy feature is the fact that last week no bark was either received at, or shipped from Colombo. It remains to be seen whether this is due to accidental circumstances, or whether owing to the proposition to form a syndicate of Cinchona planters for India and Ceylon, recently made by a well-known planter, having really met with favor, and taken root. The difficulties in the way of such a syndicate are no longer so great as they were some years ago, cinchona having been entirely cleared off in many districts, while the number of holders of bark is also greatly contracted. The promoter of the plan in question believes th a whenever such an agreement has been carried out in India and Ceylon, the adhesion of the Java planters would be tolerably certain.

Sales in London and Amsterdam were characterized by a rather better tone and somewhat higher prices.

Buyers of quinine were still backward, an improvement, however, may be anticipated with the advent of the autumn months when a large demand is expected from America.

Cocaine.—Within the last fortnight a considerably larger inquiry has set in for hydrochlorate of cocaine, and also in crude cocaine a good business was done, though at some what lower figures.

Atropine.—The sharp competition has led to further depreciation in the price of this article, the manufacture of which is now hardly any longer remunerrtive even on basis of the present extremely low prices for belladonna root.

Caffeine is now offered at ruinous rates. Caffeine oxalate is especially praised for its keeping powers.

Glycerine.—The disproportion between the prices of crude, and of the refined and distilled glycerine continues, certain speculators esteeming it in their interest to keep up the market for the former, while for the purified descriptions but a small percentage in the rise is as yet obtainable.

Lactuarium.—This is said to be also very scarce this year, and high prices are asked.

Hydracetin has in several cases showed itself useful as antipyretic and antirheumatic, yet will hardly obtain any extensive application because it has a poisonous effect even when administered in comparatively small doses. On the development of fever hydracetin like the other new antipyretics exercises no influence whatever.

Iodine.—On the 2d inst. the price was lowered from 9d. to 7d., and a corresponding reduction in the prices of all preparations has taken place. This measure is directed against some outsiders.

Sulfonal.—The demand for it is mainly suspended, since for fear of loss owing to the constantly declining price, buyers cover only their immediate wants. Sulfonal has gained a fresh rival in chloralamid, in addition to which a new hypnotic is, we hear, about to be introduced.

Acid benzoic.—Owing to similar causes—fall in price of raw material and decreased consumption has—been also lower. Within the last few days, however a recovery of benzoic and toluol is recorded so that we may see higher prices again for both articles.

### Paris Exposition Notes.

In exhibits of drugs, chemicals, pharmaceutical preparations, &c., the European States, that exhibit at all, do not make much of a showing, judging from the comments of the *British and Colonial Druggists'* correspondent at the Paris Exposition. From his letter we make the following extracts which give a good idea of the extent of this feature of the exhibition:

Belgium has but a very small exhibit, although one would have supposed that a French-speaking country, having so many business relations with France, would have gladly received the opportunity thus offered of showing what it can do. We find in the Belgian Section, some very nice attractive exhibits, but nothing very striking, the most interesting feature perhaps being the display of a Brussels firm who have a very nice assortment of essential oils of clove, caraway, sassafras, cedar wood, sandal wood, and others.


"KIENZLER'S" Select Oils of Lemon and Orange.

MEXICAN Cut Vanillas.

BOURBON Vanillas.

VANILLON.

MEXICAN NEW CROP VANILLA BEANS

Pure Super Oil of BERGAMOT.

Angostura AND Surinam Tonquas.

SEEDS.

BAHAMA Pure Natural PINEAPPLE JUICE.

Warranted strictly pure and to keep in any climate.

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Essential S Oils.

MANUFACTURERS OF

Lemon, Bergamot AND Orange.

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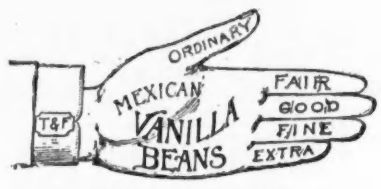


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CASCARA SAGRADA BARK, true,

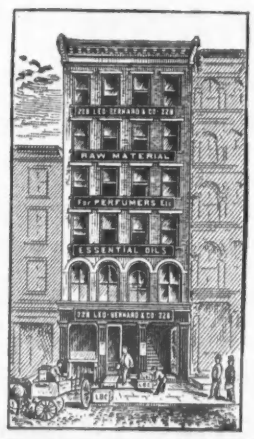
CORRESPONDENCE SOLICITED. OREGON GRAPE ROOT

LEO BERNARD & Co.

Raw Materials for Perfumers and Soap Makers.

VANILLA BEANS.

ESSENTIAL OILS.

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ANGOSTURA TONKA BEANS.

It gives a lasting flavor to the Vanilla Extract.

One ounce sent free to any part of the U. S. on receipt of $1.81.

SPECIAL PRICE FOR QUANTITY.

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323 Sacramento Street, SAN FRANCISCO.

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GUM SHELLAC

ALL GRADES.

HOWE & FRENCH, - - BOSTON

# WHOLESALE PRICES CURRENT.

☞Our Quotations are those of Importers and Manufacturers, for original packages and large lots. For broken lots higher prices are asked.

## Oils, Etc.

### Vegetable Oils.

| | | |
|---|---|---|
| Linseed Domestic Raw, in bbls, ₩ gal | — | @60 |
| Boiled, in bbls | — | @63 |
| Calcutta, Raw, in bbls | — | @60 |
| Western on spot | 57 | @58 |
| Rapeseed, in bbls | 63 | @65 |
| Mustard | 60 | @63 |
| Cottonseed, Crude Prime | 40 | @— |
| Crude, off quality | 32 | @35 |
| Yellow Summer Prime | 48 | @52 |
| Yellow Summer, off qual. | 41 | @46 |
| Yellow Summer, cooking | — | @— |
| White Summer | 42 | @45 |
| Yellow Winter | 54 | @58 |
| White Winter | 55 | @58 |
| Soap stock | 1½ | @ 1⅝ |
| Olive, Sic ly | 68 | @70 |
| Spanish | 68 | @70 |
| Soap Stock | 5 | @ 5¼ |
| Palm, prime ₩ lb | 5½ | @ 5½ |
| Off quality | 4 | @ 5 |
| Cocoanut, Domestic | 5 | @ 5½ |
| Ceylon | 5½ | @ 5¾ |
| Cochin | 7½ | @ 7¾ |
| Cuban | 5¾ | @ 5¾ |
| Castor, No. 2 | — | @— |
| No. 3 | 11 | @11½ |
| Poppy | 55 | @57 |
| Rosin, first run ₩ gal | — | @ 9 |
| Second run | — | @11 |
| Third run | — | @14 |
| Fourth run | — | @17 |

### Animal and Fish Oils.

| | | |
|---|---|---|
| Whale, natural winter ₩ gal | 45 | @46 |
| Bleached winter | 47 | @48 |
| extra bleached winter | 49 | @50 |
| Bleached spring | 46 | @47 |
| Sperm, natural winter | 75 | @76 |
| Bleached winter | 80 | @82 |
| Natural spring | 69 | @71 |
| Bleached spring | 74 | @76 |
| Sea elephant, bleached winter | 55 | @56 |
| Unbleached winter | 50 | @51 |
| Lard, prime city | 53 | @54 |
| prime, western | 53 | @54 |
| Extra No. 1 | 46 | @50 |
| No. 1 | 42 | @44 |
| No. 2 | 37 | @40 |
| Menhaden, prime crude | 23 | @25 |
| Prime southern | 21 | @22 |
| Brown strained | 26 | @26 |
| Light strained | 28 | @29 |
| Extra bleached white | 37 | @38 |
| Bleached winter | 32 | @53 |
| Bank | 26 | @27 |
| Straits | 27 | @28 |
| Herring | — | @— |
| Oleo | — | @— |
| Cod, Domestic, prime | 30 | @32 |
| Black Fish, Crude | — | @— |
| Natural | — | @— |
| Bleached Winter | — | @— |
| Degras, English | 2¾ | @ 2⅞ |
| French | — | @— |
| Tallow, Prime | 48 | @50 |
| Neatsfoot, Prime | 57 | @60 |
| No. 1 | 45 | @55 |
| Elaine Red | 36 | @39 |
| Saponified Red ₩ lb | 4½ | @ 5 |

### Mineral Oils.

| | | |
|---|---|---|
| Paraffine, High viscosity ₩ | 18 | @21 |
| 23½@24 gravity | 11½ | @12 |
| 25 gravity | 10½ | @11 |
| 28 gravity | 8½ | @ 9 |
| Red Paraffine, 21 @22 gravity | 14 | @14½ |
| 22½@23 gravity | 12 | @13 |
| Neutral filtered, 32 grav., bloomless | 18 | @20 |
| white, 33 gravity | 33 | @35 |
| 32@34 gravity, bloomless | 10 | @18 |
| 32 gravity, wool grade | 13 | @15 |
| West Virginia, natural 29 gravity | 23 | @25 |
| Franklin, natural, 32 gravity | — | @— |
| Smith's Ferry, 33@34 gravity | 7 | @ 8 |
| Black reduced, 29 gravity, 25@30 c. t. | 8 | @ 9 |
| 29 gravity, 15 cold test | 8½ | @ 9½ |
| 29 gravity, zero | — | @— |
| Summer | 6 | @ 7 |
| Cylinder, light filtered | 15 | @20 |
| dark filtered | 14 | @21 |
| extra cold test | — | @— |
| dark steam refined | 10 | @18 |

### Oil Cake.

| | | |
|---|---|---|
| Calcutta cake, city ₩ ton | —@— | — |
| City domestic | —@— | — |
| Western, in bags | 25 50@25 | 75 |
| Cottonseed cake at Memphis | —@— | — |
| do do New Orleans | 22 00@— | — |

### Oil Meal.

| | | |
|---|---|---|
| State domestic meal ₩ ton | 28 00@29 | 00 |
| Cottonseed meal at Memphis | —@— | — |
| do do New Orleans | 22 50@— | — |

### Wax Candles, Lard Tallow, Etc.

| | | |
|---|---|---|
| Paraffine wax, crude, 124@126 m p ₩ lb | 4½@ | 4½ |
| 128@130 m. p | 4½@ | 5 |
| refined 135 m. p | 8½@ | 8¾ |
| Candles, Paraffine, 4s and 6s | 8 | @11 |
| 12s | 9 | @12 |
| Adamantine, 6s, 16 oz | 9 | @10 |
| 14 oz | 8 | @ 9 |
| 12 oz | 7 | @ 8 |
| 12s, 16 oz | 10 | @11 |
| 14 oz | 9 | @10 |
| 12 oz | 8 | @ 9 |
| Patent sperm, 4s and 6s | 35 | @36 |
| Sperm, 4s and 6s | 25 | @26 |
| Stearic acid | 10 | @11 |
| Spermaceti | 23 | @25 |
| Lard | 6 00 | @7 40 |
| Stearine | 6 | @ 7½ |
| Tallow | — | @4¾ |

### Naval Stores.

| | | | | | |
|---|---|---|---|---|---|
| Sp. turpentine 44 | @41½ | I | 1 75 | @— | |
| St'd rosin | 1 02½@— | K | 1 80 | @— | |
| G d st'd | 1 05 @1 07½ | M | 1 90 | @— | |
| E | 1 20 @— | N | 2 15 | @— | |
| F | 1 30 @— | W G | 2 45 | @2 52½ | |
| G | 1 37½@— | W W | 2 55 | @2 70 | |
| H | 1 42½@— | | | | |

## Paints, Varnishes, Etc

### White Lead, Zinc, Etc.

| | | |
|---|---|---|
| American Dry White Lead ₩ lb | 6¾ | @7 |
| Pure White Lead, in oil | 7 | @7¼ |
| English White Lead, in oil | 8¼ | @8¾ |
| Zinc White, Paris, G S, 50 bbls | 7½ less 4 | ⅝ |
| G S, 25 bbls | 7½ | 2 ₩ ct |
| G S, 10 bbls | 7½ | 1 ₩ ct |
| R S, 50 bbls | 7½ | 4 ₩ ct |
| R S, 25 bbls | 7½ | 2 ₩ ct |
| R S, 10 bbls | 7½ | 1 ₩ ct |
| Antwerp R S, 50 bbls | 7 | 4 ₩ ct |
| R S, 25 bbls | 7 | 2 ₩ ct |
| R S, 10 bbls | 7 | 1 ₩ ct |
| G S, 50 bbls | 7¼ | 4 ₩ ct |
| G S, 25 bbls | 7¼ | 2 ₩ ct |
| G S, 10 bbls | 7¼ | 1 ₩ ct |
| G S in poppy oil | 10½ | @10½ |
| R S in poppy oil | 8¾ | @ 9¼ |
| French in Varnish | 16 | @20 |
| American Extra Dry | 4¼ | @ 4½ |
| Off color | 4 | @ 4½ |
| In oil | 6¼ | @6¾ |
| In varnish | 14 | @18¾ |
| L. Z. O. German zinc | 5¾ | @ 5 |
| China white | 10½ | @12 |
| Flake white | 10½ | @12 |
| Cremnitz white | 15 | @20 |

### Dry Colors.

REDS.

| | | |
|---|---|---|
| Carmine No. 40 ₩ lb | 3 10 | @4 20 |
| Crocus martus, imported | 1¼ | @ 2¼ |
| Standard American | 1¼ | @ 2½ |
| Colcothar | 3½ | @ 6 |
| Indian red, American | 3½ | @ 6½ |
| Standard American | 2 | @ 5 |
| English | 5½ | @ 7 |
| Tuscan red, English | 9¾ | @ 11 |
| Turkey red, English | 9¼ | @ 14 |
| Litharge, English flake | 9 | @ 9½ |
| American powdered | 6¼ | @ 6¾ |
| Red lead, English | 8½ | @ 9 |
| American | 6¾ | @ 7 |
| Orange mineral, English | 8¾ | @ 9½ |
| French | 9¼ | @ 9¾ |
| German | 8¾ | @ 9½ |
| American | 8 | @ 8½ |
| Rose pink, English | 9 | @ 9½ |
| American | 8 | @ — |
| Vermilion, imported English | — | @ 85 |
| Am. quicksilver, bulk | 65 | @ 70 |
| Am. quicksilver, bags | 66 | @ — |
| Chinese | 88 | @ 90 |
| Trieste | 85 | @ 87 |
| American | 11¼ | @ 12 |
| Artificial | 8 | @ 35 |
| Venetian red, ₩ | 1 40 | @1 50 |
| English prime | 1 40 | @1 50 |
| second qunlity | 1 05 | @1 25 |
| American | 1 00 | @1 35 |

YELLOWS.

| | | |
|---|---|---|
| Chrome yellow | 10 | @ 25 |
| Ocher, Rochelle | 1 35 | @1 50 |
| Washed Dutch | 5 | @ — |
| Washed French | 1½ | @ 2¼ |
| Washed Nat Oxford, Lump | 6¼ | @ 6¾ |
| Washed Nat Oxford, Powd'r | 7 | @ 7½ |
| Golden | 3¾ | @ 4 |
| Domestic | ¾ | @ 1¼ |
| Domestic, for O C & W P | ⅝ | @ 1 |

GREENS.

| | | |
|---|---|---|
| Chrome, Chemically pure | 22 | @26 |
| Extra | 12 | @13 |
| Super | 9 | @11¼ |
| Common | — | @ 8 |
| Paris, Pure | 20 | @— |
| In pulp | 11 | @12 |
| French Verdigris | 40 | @42 |

BLUES.

| | | |
|---|---|---|
| Chinese Blue | 45 | @50 |
| Prussian Blue | 20 | @35 |
| Soluble Blue | 40 | @55 |
| Ultramarine Blue | 7 | @25 |
| Celestial Blue | 5½ | @ 8 |
| Blue verditer | 25 | @30 |
| refiners' | 60 | @70 |

BROWNS.

| | | |
|---|---|---|
| Sienna, Italian, burnt & powdered | 5 | @ 6½ |
| burnt lumps | 1¾ | @ 3½ |
| raw powdered | 5 | @ 6½ |
| raw lumps | 1¾ | @ 3½ |
| American, burnt & powdered | 1¼ | @ 1¾ |
| raw | 1½ | @ 1¾ |
| Umber, Turkey, burnt and powdered | 3½ | @ 4 |
| burnt lumps | 2¾ | @ 3 |
| raw and powdered | 3¼ | @ 4 |
| raw lumps | 2¼ | @ 2¾ |
| American, burnt | 1¼ | @ 1½ |
| raw | 1¼ | @ 1½ |
| Vandyke brown, English | 6 | @ 8 |
| American | 3 | @ 3¾ |
| Spanish brown | ½ | @ 1 |

### Miscellaneous.

| | | |
|---|---|---|
| Barytes, prime white ₩ ton | 17 50 | @20 00 |
| foreign floated | 19 00 | @21 00 |
| domestic floated | 26 00 | @32 00 |
| off color | 11 50 | @14 00 |
| crude No. 1 | 8 50 | @— |
| No. 2 | 7 75 | @— |
| No. 3 | 7 50 | @— |
| Chalk | 2 00 | @— |
| kiln dried ₩ 100 lbs. | 46 | @— |
| air dried | 33 | @ 35 |
| China clay ₩ ton | 13 50 | @18 00 |
| Cobalt oxide | 2 60 | @ 2 90 |
| Feldspar ₩ ton | 15 00 | @— |
| Silex | 14 00 | @25 00 |
| Whiting, commercial ₩ 100 lbs. | 40 | @ 50 |
| gilders' | 57½ | @ 70 |
| Paris white, English cliffstone | 1 05 | @ 1 15 |
| American | 65 | @ 80 |
| French talc | 1¼ | @ 1½ |
| terra alba | 70 | @ 75 |
| American terra alba No. 1 | 65 | @ 70 |
| No. 2 | 36 | @ 40 |
| Blanc fix ₩ lb | 2½ | @ 3 |
| Dentists' plaster ₩ bbl | 1 35 | @ 1 50 |
| Calcined plaster ₩ bbl | 1 25 | @ 1 50 |
| Marble dust ₩ bbl | 90 | @ 1 00 |
| Pumice stone, original cks ₩ lb | 1¾ | @ 2 |
| selected lumps in bbls | 3½ | @ — |
| powdered pure in bbls | 2¼ | @ 2½ |
| Rotten stone original cks | 4½ | @ 5½ |
| selected lumps | 6 | @ 10 |
| powdered, in bbls | 3½ | @ 3½ |
| Rubbing stone | — | @ 7 |
| Bronze powder | — | @— |
| Brocades | 45 | @ 1 00 |
| Smalt, German blue | 15 | @— |
| super black | — | @— |
| Putty bulk | 1¾ | @ 2½ |
| bladders | 2 | @ 2½ |
| tins | — | @ 2¾ |

### Glues.

| | | |
|---|---|---|
| Extra white ₩ lb | 17 | @20 |
| Medium white | 13 | @15 |
| Cabinet | 12 | @14 |
| Low grade | 8 | @10 |
| Foot stock, white | 9¼ | @13½ |
| brown | 4 | @ 8 |
| Irish | 12¼ | @14½ |
| French | 9½ | @22½ |
| English | 10½ | @15 |

### Metallic Paints.

| | | |
|---|---|---|
| Brown ₩ ton | $18 00 | @25 00 |
| Red | 27 50 | @32 50 |
| Yellow | 27 50 | @32 50 |

### Colors in Oil.

| | | |
|---|---|---|
| Black coach, Japan ₩ lb | 18½ | @20 |
| in oil | 12 | @13 |
| Drop black | 8½ | @14½ |
| Ivory black | 8½ | @14½ |
| Lamp black | 12 | @20 |
| Chinese blue | 35 | @40 |
| Prussian blue | 20 | @45 |
| Ultramarine blue | 12 | @18 |
| Burnt sienna | 7 | @14 |
| Raw sienna | 7 | @14 |
| Burnt umber | 7 | @11 |
| Raw umber | 7 | @11 |
| Vandyke brown | 7 | @12½ |
| Chrome green | 8 | @14 |
| Paris green | 16 | @18½ |
| English drop black | 12½ | @14 |
| American drop black | 7½ | @10 |
| Frankfort drop black | 25 | @30 |
| Lampblack, pr lme | 27½ | @33 |
| medium | 19½ | @26 |
| 2d quality | 13 | @19 |
| low grade | 6½ | @10 |
| Naphtha, black | 60 | @— |
| Fine calcined velvet black | 16 | @25 |
| Medium calcined velvet black | 12 | @15 |

### Varnish Gums.

| | | |
|---|---|---|
| Copal Sierra Leone, cleaned | 37½ | @40 |
| Zanzibar, bold white | 95 | @95 |
| medium white | 75 | @80 |
| bean and pea | 45 | @50 |
| Manila, pale | 17 | @20 |
| bright amber | 13 | @15 |
| standard | 9 | @10½ |
| Damar, Batavia | 19 | @21 |
| Kauri, standard | 13½ | @16 |
| No. 2 | 12 | @14 |
| hard scraped | 22 | @24 |
| light hard scraped | 28 | @30 |
| picture quality | 65 | @70 |
| pale and fine selected | 42 | @65 |
| Sandrac | 22 | @30 |
| Asphaltum, Cuban, prime | 4½ | @ 5½ |
| sandy | 4 | @ 5 |
| Egyptian | 8 | @ 9 |

### Glass.

WINDOW GLASS.

AMERICAN AND FRENCH SINGLE.

Prices per Fifty Feet.

| Sizes. | 1st. | 2d. | 3d. | 4th. |
|---|---|---|---|---|
| 6x 8 to 10x15 | $10 50 | $ 9 00 | $ 8 50 | $ 8 00 |
| 11x14 to 16x24 | 11 50 | 10 75 | 10 25 | 9 75 |
| 18x22 to 20x30 | 15 50 | 14 00 | 13 00 | 12 50 |
| 15x36 to 24x30 | 16 50 | 15 00 | 13 50 | .... |
| 20x28 to 24x36 | 17 75 | 16 25 | 14 75 | .... |
| 26x36 to 26x44 | 19 00 | 17 50 | 15 25 | .... |
| 26x46 to 30x50 | 21 00 | 19 50 | 17 00 | .... |
| 30x52 to 30x54 | 22 00 | 20 25 | 18 00 | .... |
| 30x56 to 34x56 | 23 00 | 21 25 | 19 00 | .... |
| 34x58 to 34x60 | 24 00 | 22 75 | 21 00 | .... |
| 24x36 to 36x28 | 26 00 | 25 00 | 23 00 | .... |
| 36x60 to 40x60 | 26 50 | 24 50 | 23 00 | .... |

AMERICAN AND FRENCH DOUBLE.

Prices per Fifty Feet.

| Sizes. | 1st. | 2d. | 3d. | 4th. |
|---|---|---|---|---|
| 6x to 10x15 | $13 00 | 12 50 | $12 00 | $11 50 |
| 11x14 to 16x24 | 16 00 | 15 00 | 14 50 | .... |
| 18x22 to 20x30 | 20 50 | 19 50 | 18 50 | .... |
| 15x36 to 24x30 | 22 00 | 20 75 | 19 50 | .... |
| 20x28 to 24x36 | 25 00 | 23 00 | 21 50 | .... |
| 26x36 to 26x44 | 26 00 | 25 00 | 23 00 | .... |
| 26x46 to 30x50 | 28 00 | 26 50 | 24 50 | .... |
| 30x52 to 30x54 | 30 00 | 28 00 | 26 00 | .... |
| 30x56 to 34x56 | 31 00 | 30 00 | 28 00 | .... |
| 34x58 to 34x60 | 32 50 | 31 00 | 29 00 | .... |
| 36x60 to 40x60 | 36 00 | 33 50 | 32 00 | .... |

Discounts: Amer., 80@80&10%; French, 75&10%.

## Drugs.

### Opium.

| | | |
|---|---|---|
| Opium, in bond ₩ lb | 2 25 | @2 50 |
| duty paid (cases) | 3 25 | @3 50 |
| as wanted | 3 30 | @3 50 |
| powdered | 4 25 | @4 30 |
| Morphine | 2 40 | @2 70 |
| foreign | 2 25 | @2 40 |

### Quinine.

| | | |
|---|---|---|
| Quinine American ₩ oz. | 32 | @ 39 |
| English | — | @— |
| French | — | @— |
| German | 28 | @ 35 |
| Cinchonidia, American | 4 | @ 5 |
| foreign | 2 | @ 5 |
| Quinidia, German | 24 | @ 29 |

### Miscellaneous.

| | | |
|---|---|---|
| Acid benzoic, German ₩ lb | 52 | @ 55 |
| English ₩ oz. | 11 | @ 12 |
| boracic purified ₩ lb | 20 | @— |
| refined | 14½ | @ 14¾ |
| flaky | 14 | @— |
| carbolic, pure crystals bot | 32 | @ 35 |
| drums | 27 | @ 29 |
| citric, domestic | 42½ | @ 43 |
| foreign | 42 | @ 42½ |
| salicylic, bulk & boxes | 1 20 | @ 1 25 |
| Alcohol, 94 p ct, free per gal | 1 98 | @ 2 08 |
| refi'd wood, 97 p ct | — | @ 1 15 |
| 95 p ct | — | @ 1 10 |
| 92 p ct | — | @ 1 05 |
| Inodorous | 1 50 | @ 1 60 |
| Cologne spirits, 188 p t | 2 18 | @ 2 28 |
| Ambergris gray | 30 00 | @35 00 |
| black | 9 00 | @12 00 |
| Ammonia carb, foreign | 7¾ | @ 8 |
| domestic | 8 | @ 8½ |
| Bay rum imp, bulk | 1 95 | @ 2 00 |
| Barbadoes tar | 32 | @ 35 |
| Borax, refined city, bbls ₩ lb | 9½ | @ 9⅝ |
| Cal., bbls | 8½ | @ 9¾ |
| concentrated | 7¾ | @ 8⅜ |
| powdered | 8½ | @ 9⅝ |
| Bromine | 37 | @ 38 |
| Burgundy pitch | 2¾ | @ 3 |
| Cantharides, Russian | 95 | @ 1 05 |
| Chinese | 25 | @ 27 |
| Calomel, domestic | 73 | @ 75 |
| English | 1 05 | @ 1 10 |
| Castile soap, white | 10¾ | @ 12 |
| green, pure | 6½ | @ 9 |
| mottled ordinary | 4½ | @ 4¾ |
| pure | 5½ | @ 6 |
| Chian turpentine ₩ oz. | 45 | @— |
| Chloroform | 27 | @ 30 |
| Colocynth apples, Trieste ₩ lb | 34 | @ 42 |
| pressed | — | @— |
| Spanish | 24 | @ 28 |
| Cacao butter | 35½ | @ 40 |
| Chloral hydrate, crystals | 1 55 | @— |
| plates | 1 25 | @— |
| Corrosive sublimate | 70 | @ 72 |
| Cuttlefish bone, Trieste | 22 | @ 23 |
| Dragon's blood mass | 20 | @ 28 |
| reed | 40 | @ 45 |
| Ergot, Spanish | 40 | @ 50 |
| German | 30 | @ 32 |
| Gelatine English | 50 | @ 60 |
| French | 30 | @— |
| American | 85 | @— |
| Glucose | 2¾ | @ 3¼ |
| Grape sugar | 2½ | @ 3 |
| Glycerine, German, refined, dms | 20 | @— |
| Amer'n, ref. bbls & cs | 21 | @ 23 |
| No. 1 | 19 | @ 21 |
| Glycerine, crude | 11 | @ 12 |
| Guarana, whole | 1 20 | @ 1 25 |
| Powdered | 1 30 | @ 1 35 |
| Iceland moss | 5 | @ 5½ |
| Indian hemp (Canabis In) | 7 | @ 10 |
| Insect powder | 30 | @ 35 |
| Irish moss | 6½ | @ 12 |
| Isinglass, Russian | 3 50 | @ 3 75 |
| American ordinary | 70 | @ 75 |
| prime | 90 | @ 1 50 |
| Iodine, re-sublimed | 1 90 | @— |
| Licorice paste, domestic | 6 | @ 15 |
| foreign | 24 | @ 29 |
| Lupulin, American ₩ lb | — | @ 60 |
| German | 30 | @— |
| Lycopodium, prime | 33 | @— |
| Manna, large flake | 75 | @ 78 |
| Small flake | 34 | @ 35 |
| Sorts | 25 | @ 30 |
| Menthol | 1 45 | @ 75 |
| Musk, true grain ₩ oz | 40 00 | @42 00 |
| Tonquin pods | 25 00 | @26 00 |
| Canton grains | 20 | @ 1 00 |
| Nitrate barium ₩ lb | 7 | @ 8 |
| Strontia ₩ lb | 8½ | @ 9 |
| Nux vomica, pockets ₩ lb | 2 | @ 4 |
| Oil, Almond, sweet | 20 | @— |
| Myrbane, American | 16 | @ 18 |
| English | 16 | @ 18 |
| German | — | @— |
| Sesame ₩ bbl | 70 | @— |
| Castor, city, bbls & cases | 14½ | @— |
| Cod liver Norwegian ₩ bbl | 20 50 | @26 |
| Newf'land ₩ gal | 60 | @ 65 |
| Phosphorus ₩ lb | 70 | @ 75 |
| Precip, red | 88 | @ 90 |
| White | 93 | @— |
| Precipitated chalk, Eng. bk | 4½ | @ 5 |
| bbls | 7 | @— |
| Potassium, bromide, bulk | 33 | @ 34 |
| glass | 42 | @ 43 |
| Iodide, bulk | 1 65 | @ 1 70 |
| glass | 1 73 | @ 1 78 |
| Quicksilver | 69 | @ 70 |
| Sago, pearl | 3½ | @ 3 |
| Flour | 3½ | @ 4 |
| Sugar of milk cob | 16 | @ 17 |
| Powdered | 16 | @ 17 |
| Sulphur, roll | — | @ 2¾ |
| Flour | — | @ 2 |
| Salicine | 1 75 | @ 1 90 |
| Tamarinds ₩ keg | 2 25 | @ 2 75 |
| Venice turpentine ₩ lb | 18 | @ 20 |
| Wax, brown southern | 23½ | @ 25 |
| State | 25 | @ 26 |
| White, pure | 40 | @ 45 |
| Japan | 10 | @ 12 |
| Carnauba | 13 | @ 15 |
| Ceresin | 10½ | @ 11 |

### Balsams.

| | | |
|---|---|---|
| Copaiba, Angostura ₩ lb | 60 | @ 70 |
| Para | 55 | @ 60 |
| Central American | 43 | @ 45 |
| Fir, Canada ₩ gal | 2 00 | @2 15 |
| Oregon | 90 | @1 10 |
| Peru ₩ lb | 90 | @1 00 |
| Tolu | 28 | @ 30 |

### Barks.

| | | |
|---|---|---|
| Angostura ₩ lb | 12 | @ 14 |
| Bayberry | 5 | @ 7 |
| Buckthorn | 5 | @ 7 |
| Cascara Sagrada | 8 | @ 13 |
| Cascarilla | 5 | @ 7 |
| Canella | 7 | @ 8 |
| Cinchona, red | 25 | @ 28 |
| yellow | 12 | @ 28 |
| Coto | 60 | @ 65 |
| Elm, common | 7 | @ 10 |
| selected | 12 | @ 14 |
| Loxa | — | @— |
| Oak, white | 3½ | @— |
| red | 3½ | @— |
| Orange peel, West Indian | 5½ | @— |
| Malaga prime | 5 | @ 10 |
| Curacoa | 7 | @ 8 |
| Prickly ash | 10 | @— |
| Pomegranate (of root | 10 | @ 25 |
| Quebracho | 12 | @— |
| Sassafras | 4 | @ 6 |
| Simaruba | 13 | @ 16 |
| Soap, whole | 4½ | @ 4½ |
| crushed | 5½ | @ 6 |

### Beans.

| | | |
|---|---|---|
| Vanilla, Mexican ₩ lb | 4 50 | @10 00 |
| Bourbon | 4 00 | @ 9 00 |
| Tonka, Angostura | 1 25 | @ 1 40 |
| Surinams | — | @ 1 15 |
| Para | 80 | @ 1 10 |
| Calabar | 20 | @ 25 |
| St. Ignatius | 15 | @ 15 |

### Berries.

| | | |
|---|---|---|
| Cubeb ₩ lb | 1 50 | @ 1 75 |
| Juniper | 2½ | @ 3 |
| Fish (Cocculus Ind) | 4 | @ 4½ |
| Laurel | 5 | @— |
| Prickly ash | 16 | @ 18 |

### Essential Oils.

| | | |
|---|---|---|
| Anise ₩ lb | 1 60 | @ 1 65 |
| Almond (bitter) | 2 50 | @ 6 75 |
| Bay, ₩ bottle of 22 ozs | 6 00 | @— |
| Bay oil, ₩ lb | 3 62½ | @ 4 35 |
| Bergamot | 2 00 | @ 2 60 |
| Black pepper | 65 | @ 5 50 |
| Cajeput | 65 | @ 70 |
| Camphor | 6½ | @ 11 |
| Caraway, seed | 1 05 | @ 1 40 |
| chaff | 40 | @ 52 |
| Cassia | 1 10 | @ 1 12½ |
| Citronella | 31 | @ 33 |
| Clove | 1 25 | @ 1 35 |
| Copaiba | 90 | @ 1 00 |
| Croton | 95 | @ 1 00 |
| Cubebs | 14 50 | @15 00 |
| Cumin, American | 3 00 | @ 4 50 |
| Fennel | 85 | @— |
| seed | 1 50 | @— |
| Geranium, Turkish | 3 00 | @ 3 50 |
| rose, French | 8 00 | @ 9 50 |
| Gingergrass | 2 25 | @— |
| Juniper, once rect | — | @— |
| twice rect | 1 75 | @— |
| wood | 27 | @— |
| Lavender, garden | 70 | @ 85 |
| flowers | 2 25 | @ 2 75 |
| Lemon | 1 00 | @ 1 50 |
| Lemongrass | 70 | @— |
| Neroli, bigarade | 40 00 | @55 00 |
| Portugal | 27 50 | @— |
| Petale | 50 00 | @60 00 |
| Nutmeg | 2 10 | @ 2 35 |
| Orange, sweet | 1 30 | @ 1 75 |
| bitter | 2 50 | @ 3 00 |
| Origanum | 18 | @ 20 |
| Peppermint, tin cans | 1 90 | @ 2 25 |
| cases | 2 60 | @ 2 65 |
| Pennyroyal | 85 | @ 95 |
| Rose, ordinary ₩ oz | 4 25 | @ 4 75 |
| special brands | 4 50 | @ 5 25 |
| Rosemary, Trieste ₩ lb | 55 | @— |
| French | — | @ 35 |
| Flowers | 70 | @— |
| Sandalwood | 2 25 | @10 50 |
| Sassafras | 45 | @ 47 |
| Spearmint | 2 00 | @ 2 25 |
| Tanzy | 1 75 | @ 2 00 |
| Thyme, red | 21 | @ 23½ |
| white | 30 | @ 1 10 |
| Wintergreen | 1 90 | @ 1 95 |
| Wormseed | 1 25 | @— |
| Wormwood | 4 00 | @ 4 50 |

### Flowers.

| | | |
|---|---|---|
| Arnica ₩ lb | 5 | @ 7½ |
| Chamomile, German | 12 | @ 22 |
| Roman | 18 | @ 30 |
| Insect | 22 | @ 35 |
| Lavender | 2½ | @— |
| Rosemary | 15 | @ 20 |
| Saffron, American | 25 | @ 0 |
| Alicante | 6 50 | @ 8 50 |
| Valencia | 14 50 | @16 50 |

### Gums.

| | | |
|---|---|---|
| Aloes, Cape ₩ lb | 5 | @ 5½ |
| Barbadoes | 15 | @ 20 |
| Curacoa | ½ | @— |
| Socotrine | — | @ 40 |
| Arabic, 1st picked | ½ | @ 97 |
| 2d picked | — | @ 72½ |

| | | | |
|---|---|---|---|
| 3d picked | | 64½@ | 67 |
| 4th picked | | 54½@ | 57 |
| Sorts | | 45 @ | 60 |
| Siftings | | 25 @ | 40 |
| Senegal, picked | | 43 @ | 45 |
| sorts | | 26 @ | 28 |
| Asafœtida | | 8 @ | 8½ |
| Benzoin | | 25 @ | 40 |
| Camphor, refined, in bbls | | 31 @ | — |
| in cases | | — @ | 32 |
| Chicle | | 36 @ | 38 |
| Euphorbium | | 15 @ | 17 |
| Gamboge pipe and block | | 55 @ | 60 |
| Gedda, siftings | | 18 @ | 20 |
| sorts | | — @ | — |
| Guaiac | | 28 @ | 35 |
| Kino | | 10 @ | 11 |
| Mastic | | 72 @ | 75 |
| Myrrh | | 20 @ | 40 |
| Olibanum, tears | | 15 @ | 18 |
| sorts | | 6½@ | 7½ |
| Sandrac | | 22 @ | 23 |
| Scammony, Alleppo | 2 | 25 @3 | 00 |
| Virgin | 6 | 00 @6 | 50 |
| Tragacanth Aleppo, 1st flake | | 46 @ | 49 |
| 2d flake | | 39 @ | 42 |
| 3d flake | | 34 @ | 36 |
| Turkey, 1st flake | | 70 @ | 75 |
| 2d flake | | 52½@ | 55 |
| 3d flake | | 40 @ | 45 |

### Herbs and Leaves.

| | | | |
|---|---|---|---|
| Aconite | ℔ lb | 9 @ | 11 |
| Althea | | 8 @ | 10 |
| Belladonna | | 12 @ | 15 |
| Buchu, short | | 5 @ | 7½ |
| long | | 15 @ | 17 |
| Coca | | 20 @ | 30 |
| Damiana | | 17 @ | 19 |
| Digitalis | | 6 @ | 9 |
| Eucalyptus | | 4 @ | 5½ |
| Grindelia robusta | | 12 @ | 14 |
| Henbane (hyosciamus) | | 9 @ | 12 |
| Horehound | | 6 @ | 8 |
| Jaborandi | | 15 @ | 20 |
| Laurel | | 3½@ | 4 |
| Lobelia | | 4 @ | 7 |
| Matico | | 18 @ | 20 |
| Marjoram, German | | 14 @ | 20 |
| French | | 12 @ | — |
| Prince's pine | | — @ | 8 |
| Rose, red | | 90 @1 | 15 |
| pale | | 30 @ | 40 |
| Rosemary | | 3 @ | 4 |
| Sage, Italian | | 2 @ | 5 |
| Senna, Alex. nat | | 19 @ | 20 |
| siftings | | 16 @ | 17 |
| garbled and sifted | | 24 @ | 25 |
| Tinnivelly | | 7 @ | 20 |
| Thyme | | 4½@ | 10 |
| Uva Ursi | | 4 @ | 5 |
| Yerba Santa | | 10 @ | 12 |

### Roots.

| | | | |
|---|---|---|---|
| Aconite | ℔ lb | 10½@ | 11 |
| Alkanet | | 7 @ | 8 |
| Althea, whole | | 14 @ | 14½ |
| cut | | 18 @ | 22 |
| Angelica, German | | 10 @ | 12 |
| American | | 9 @ | 10 |
| Arrowroot, Bermuda | | 31 @ | 35 |
| St. Vincent, bbls &cns | | 6½@ | 7 |
| Jamaica | | 10 @ | 11 |
| Arnica | | 7½@ | 8 |
| Belladonna | | 8 @ | 12 |
| Blood | | 5½@ | 6 |
| Burdock | | 7½@ | 8 |
| Calamus, bleached | | 18 @ | 20 |
| unble'd, split & peeled | | 7 @ | 10 |
| Canada snake, select | | 15 @ | 17 |
| Colchicum | | — @ | 10 |
| Colombo | | 10 @ | 12 |
| Culvers | | 11 @ | 12 |
| Dandelion, German | | 10½@ | 11 |
| American cut | | 11 @ | 12 |
| Elecampane | | 5 @ | 5½ |
| Galangal | | 2 @ | 2½ |
| Gentian | | 3½@ | 4½ |
| Ginseng | 2 | 40 @2 | 60 |
| Ginger, Jamaica, unbleached | | 16 @ | 16½ |
| American, bleached | | 17½@ | 18 |
| London, bleached | | 17½@ | 18 |
| Golden seal | | 40 @ | 41 |
| Hellebore, white, powdered | | 8½@ | 9 |
| whole | | 5½@ | 7 |
| Ipecac, Rio | 1 | 80 @1 | 90 |
| Jalap | | 13 @ | 14 |
| Kava Kava | | 18 @ | 20 |
| Lady slipper | | 12 @ | 15 |
| Lovage, American | | 40 @ | 50 |
| German | | 19 @ | 20 |
| Licorice, ordinary | | 5 @ | 7 |
| selected, in bdls | | 12½@ | 20 |
| Mandrake | | 6 @ | 8 |
| Orris, Florentine | | 11 @ | 13 |
| finger | | 48 @ | 75 |
| Verona | | 5½@ | 6 |
| Pareira brava | | 18 @ | 20 |
| Pellitory | | 16 @ | 18 |
| Pink | | 25 @ | 30 |
| Rhatany | | 8 @ | 10 |
| Rhubarb, whole | | 35 @ | 80 |
| cut | | 45 @1 | 75 |
| Sarsaparilla, Honduras | | 26 @ | 35 |
| Mexican | | 5½@ | 6½ |
| American | | 6 @ | — |
| Senega, Southern | | 39 @ | 40 |
| Western | | 39 @ | 40 |
| Serpentaria, Texas | | 30 @ | 35 |
| Stillingia | | 8 @ | 10 |
| Squills, ordinary | | — @ | 5 |
| white, prime | | 5 @ | 6 |
| Valerian, German | | 10 @ | 11 |
| Belgian | | 6 @ | 7 |
| English | | — @ | 17 |
| Vermont | | 10 @ | 11 |
| Yellow dock | | 7 @ | 9 |

### Seeds.

| | | | |
|---|---|---|---|
| Anise, Italian | ℔ lb | 7½ @ | 10½ |
| Spanish | | — @ | 12 |
| star | | 25 @ | 28 |
| Canary, Sicily | | 2½@ | 3 |
| Smyrna | | 2½@ | 2½ |
| Spanish | | 2½@ | 3 |
| Caraway, Dutch | | 4¾@ | 5 |
| German | | — @ | — |
| Cardamom, Alleppy | | 60 @ | 90 |
| Malabar | | 55 @ | 90 |
| Mangalore | | 70 @ | 1 50 |
| Celery | | 11 @ | 11½ |
| Colchicum | | 65 @ | 70 |
| Coriander, English | | 3½@ | 4 |
| French | | 4½@ | 5 |
| German | | 4 @ | 4½ |
| Cummin | | 9 @ | 9½ |
| Fennel, German | | 8 @ | 10 |
| Fœnugreek | | 2½@ | 2¾ |
| Guinea grains | | 8 @ | 8¼ |
| Hemp, Russian | | 2½@ | 3 |
| Smyrna | | — @ | — |
| Lobelia | | 25 @ | 30 |
| Millet, domestic | ℔ bush. | 1 10 @ | — |
| foreign | ℔ lb. | 2½@ | 2¾ |
| Mustard, California yellow | | 2½@ | 3 |
| brown | | 3½@ | 4 |
| Dutch | | — @ | — |
| English | | 4½@ | 5 |
| Trieste brown | | 5½@ | 7 |
| Poppy, white | | 12 @ | 14 |
| Quince, German | | 28 @ | 35 |
| Russian | | 20 @ | 22 |
| Rape, domestic | | 3½@ | 4 |
| English | | — @ | — |
| German | | 3½@ | 4 |

### Shellac.

| | | | |
|---|---|---|---|
| D. C | ℔ lb. | 29 @ | 30 |
| Octagon B | | 24 @ | 25 |
| V. S. O | | 24 @ | 25 |
| Dismond I | | 23 @ | 24 |

| | | | |
|---|---|---|---|
| S. S | | 21 @ | 22 |
| Garnet, A C | | 14½@ | 15½ |
| T. N. quality | | 18 @ | 19 |
| Natives | | 18 @ | 19 |
| Button | | 25 @ | 28 |
| Bleached | | 22 @ | 23 |

### Spices.

| | | | |
|---|---|---|---|
| Cassia, Batavia | ℔ lb. | 7 @ | 7¼ |
| China | | 4¾@ | 5 |
| Saigon, rolls | | 24 @ | 28 |
| broken | | 20 @ | 21 |
| chips | | 6 @ | 8 |
| buds | | 12 @ | 12½ |
| Cloves, prime Zanzibar | | 15½@ | 16 |
| Amboyna | | 24 @ | 25 |
| stems | | 4½@ | 5 |
| Ginger, African | | 4¾@ | 4½ |
| Calcutta | | 3¾@ | 3½ |
| Cochin | | 4½@ | 10 |
| Mace, Batavia | | 68 @ | 70 |
| Banda | | — @ | 75 |
| Penang | | 75 @ | 80 |
| Nutmegs, 110's | | 63 @ | 65 |
| Pepper, Singapore | | 15 @ | 15¼ |
| West Coast | | 13¾@ | 14½ |
| Acheen, prime | | 13 @ | 14 |
| Penang, white | | 19 @ | 20 |
| Singapore, white | | 23½@ | 24 |
| red, Zanzibar | | 8 @ | 8½ |
| Bombay | | 6½@ | 7 |
| Pimento, prime | | 6¾@ | 7 |

## Chemicals.

### Heavy Chemicals.

| | | | |
|---|---|---|---|
| Alkali, 36 ℔ cent | 1 | 20 @1 | 25 |
| refined, high test | 1 | 12½@1 | 25 |
| Bleach, over 35 ℔ cent | 1 | 75 @1 | 85 |
| Saltcake | | 60 @ | 62½ |
| Soda ash, carb, 48 per cent | 1 | 25 @1 | 35 |
| high test | 1 | 12½@1 | 15 |
| Caustic, 48 ℔ cent | 1 | 25 @1 | 37½ |
| high test | 1 | 12½@1 | 15 |
| Newcastle, 48 per cent | 1 | 25 @1 | 37½ |
| high test | 1 | 15 @1 | 20 |
| Soda bicarb, English | 2 | 10 @2 | 35 |
| American | 2 | 00 @2 | 50 |
| carbonate | 1 | 75 @1 | 80 |
| caustic, 60 ℔ cent | 2 | 37½@3 | 00 |
| 70 ℔ cent | 2 | 20 @2 | 30 |
| 74 ℔ cent | 2 | 17½@2 | 30 |
| 76 ℔ cent | 2 | 17½@2 | 30 |
| sal, English | | 95 @1 | 00 |
| American | | 90 @1 | 10 |

### Acids.

| | | | |
|---|---|---|---|
| Acid, acetic | | 2 @ | 2¼ |
| chemically pure | | 16 @ | 17 |
| pure | | 5½@ | 8½ |
| oxalic | | 9½@ | 10½ |
| sulphuric, 60 deg | | 80 @ | 1¼ |
| 66 deg | | 1 @1 | 7o |
| muriatic, 16 deg | | 95 @ | 1¼ |
| 18 deg | | 1 @1 | 50 |
| 20 deg | | 1¼@1 | 75 |
| 22 deg | | 1¾@2 | |
| nitric, 36 deg | | 4 @ | 4¼ |
| 38 deg | | 4½@ | 4¾ |
| 40 deg | | 5 @ | 5¼ |
| 42 deg | | 6 @ | 6¼ |
| tartaric, crystals | | 33 @ | 34 |
| powdered | | 34 @ | 35 |

### Ammonias, Potashes and Fertilizing Chemicals.

| | | | |
|---|---|---|---|
| Ashes, pot, 1st sorts | ℔ lb. | 4 @ | 4¼ |
| pearl | | 5 @ | 5¼ |
| Potash, chlorate, English | | 13 @ | 14 |
| powdered | | 13 @ | 14 |
| carb | | 4 70 @ | 5½ |
| caustic | | 7½@ | 8 |
| cyanide, fused | | 39 @ | 40 |
| obl m'ure salt 48@50% | | — @ | 1 20 |
| sulphate of, basis 90% | | 2 30 @ | 2 32½ |
| Kainit, 22% S. of P. ℔ ton | | 9 75 @ | 11 00 |
| Sylvinit, 27@35% S. F. P., ℔ unit | | — @ | 42½ |
| Aqua ammonia (in cbys) 16% ℔ lb. | | 3½@ | 3¾ |
| 18% | | — @ | 4¼ |
| 20% | | — @ | 6 |
| 22% | | 6 @ | 7 |
| 26% | | 10 @ | 11 |
| Ammonia, sal, rough | | 6½@ | 7½ |
| white | | 7½@ | 8 |
| lump | | 8½@ | 9 |
| sulphate | 3 | 05 @ | 3 10 |
| Potash muriate, ℔ 100 lb | 1 | 80 @ | 1 87½ |
| steamer | | — @ | — |

**Ammoniates, Etc.:**

| | | | |
|---|---|---|---|
| Azotine, ℔ unit | 2 | 30 @ | 2 35 |
| Blood, dried, red, ℔ unit, west | 2 | 30 @ | 2 32½ |
| low grade, ℔ unit | 2 | 25 @ | 2 30 |
| Concentrated Tavcap, ℔ unit | 2 | 27½@ | 2 30 |
| Bones, rough, ℔ ton | 20 | 00 @23 | 00 |
| ground, ℔ ton | 25 | 00 @28 | 00 |
| Bone black, refuse, ℔ ton | 19 | 50 @21 | 00 |
| Kieserite | 7 | 00 @ 7 | 50 |
| Fish guano, dried | 23 | 50 @24 | 00 |
| acidulated | 12 | 00 @— | — |
| wet | 10 | 00 @10 | 50 |
| Phosphate rock, f. o. b. Char'n | 5 | 75 @ 6 | 75 |
| Phosphate rock, ground | 11 | 00 @11 | 50 |
| Acid phosphate, 14% per unit | | 80 @ | 82½ |

### Miscellaneous.

| | | | |
|---|---|---|---|
| Acetate of lime, gray | | 1¾@ | 1⅞ |
| brown | | 95 @1 | 00 |
| Alum, lump | | 1¾@ | 1⅞ |
| ground | | 1⅞@ | 2 |
| Cake | | 1¼@ | 1¼ |
| Argols, crude Oporto | | — @ | — |
| plate | | 23 @ | 24 |
| half refined | | 24 @ | — |
| Arsenic, white | | 3½@ | 3½ |
| red | | 5¾@ | 6¼ |
| Brimstone crude, best 2ds | 19 | 75 @20 | 50 |
| 3ds | 18 | 87½@19 | 50 |
| Copperas, | | 60 @ | 70 |
| powdered | | 1¼@ | 1¼ |
| Cream tartar, crystals, 99 p. c | | 22½@ | — |
| powdered, 99 p. c | | 23 @ | — |
| Glauber salts | | 75 @ | 80 |
| Epsom salts | 1 | 15 @1 | 20 |
| Nitrate of lead | | 9 @ | 10 |
| soda | 1 | 82½@1 | 90 |
| Rochelle salts | | 24 @ | 25 |
| Sugar lead, brown | | 7½@ | 8 |
| white | | 12 @ | 13½ |
| Saltpeter, crude | | 5½@ | 5½ |
| refined | | 6 @ | 8 |
| Vitriol, blue ordinary | | 5½@ | 5⅝ |
| extra | | — @ | |

## Dyestuffs.

| | | | |
|---|---|---|---|
| Acid picric best crystals | ℔ lb. | 50 @ | 55 |
| Albumen prime egg | | 70 @ | 75 |
| imported blood | | 19 @ | 22½ |
| domestic blood | | 17 @ | 19 |
| No. 1½ blood | | 15 @ | — |
| Alizarine | | 19 @ | 21 |
| Annatto | | 10 @ | 25 |
| seed | | 4 @ | 6 |
| Archil weed | | 7 @ | 15 |
| Aurine | | 58 @ | — |
| Barbary root, cut | | 4 @ | — |
| Bichromate of potash, Scotch | | 10½@ | 11 |
| American | | 10½@ | 11 |
| Bichromate of soda | | 8½@ | 11 |
| Carmine of indigo | | 40 @ | — |
| Cochineal, Teneriffe silver | | 30 @ | 32 |
| black | | 30 @ | 32 |
| gray black | | 33 @ | 35 |
| Mexican | | — @ | — |
| ammoniac | | — @ | 37 |
| Cudbear, French | | 12 @ | — |
| concentrated | | 25 @ | — |
| English | | 12 @ | 30 |
| Cutch, slab | | 7½@ | 7¾ |
| bag | | 5½@ | 5¾ |
| Dextrine | | 5½@ | 5¾ |
| Divi divi | ℔ ton. | 35 00 @50 | 00 |
| Fullers earth, lump | ℔ lb | 90 @ | 95 |
| powdered | | 1½@ | 2 |
| Flavine | | 27 @ | 28 |
| Fustic stick | ℔ ton | 20 00 @26 | 00 |
| Gambier | ℔ lb | 7½@ | — |
| Garancine | | 8½@ | 9 |
| Indigo, Bengal, low grade | | 80 @ | 85 |
| medium | 1 | 10 @ | 1 20 |
| high grade | 1 | 25 @ | 1 40 |
| Caracas | | — @ | — |
| Kurpahs | | 75 @ | 1 05 |
| Gautemalas | | 60 @ | 75 |
| Manila | | 70 @ | 75 |
| Madras | | 65 @ | 85 |
| Indigotine | 3 | 00 @ | 4 00 |
| Lac dye | | 9 @ | 15 |
| Logwood stick | ℔ ton | 22 00 @36 | 00 |
| Madder, Dutch | ℔ lb | 7½@ | 8½ |
| French | | 5 @ | 7 |
| Myrobalans | | 2 @ | 2½ |
| Muriate of tin | | 8 @ | 13 |
| Nitrate of iron, commercial | | 1¾@ | 2 |
| true | | 4½@ | 5 |
| Nutgalls, blue Alleppo | | 14 @ | 15½ |
| Chinese | | 16 @ | 16½ |
| Oxymuriate of antimony | | 4 @ | 6 |
| Persian berries | | 15 @ | 17 |
| Prussiate of potash, Am. yellow | | 17½@ | 18 |
| red | | 42 @ | 45 |
| Scotch yel. | | 19 @ | 20 |
| red | | 42 @ | 45 |
| German yel. | | 19 @ | — |
| red | | 42 @ | 45 |
| Prussiate of soda | | 17½@ | 18 |
| Phosphate of soda | | 7 @ | 8 |
| Safflower | | — @ | — |
| Sago flour | | 3½@ | 3¼ |
| Salts of tartar | | 6½@ | 7 |
| Soluble oil | | — @ | 6 |
| Sumac, Sicily prime | ℔ ton. | 57 50 @65 | 00 |
| Virginia | | 47 50 @50 | 00 |
| Starch, corn | ℔ lb | 2¾@ | 2⅝ |
| potato | | 4½@ | 4⅝ |
| wheat | | 5¾@ | 6 |
| Stannate of soda, 50% soluble | | — @ | 15 |
| Stannate of soda, 40% soluble | | — @ | 12 |
| 25% soluble | | — @ | 9 |
| 20% soluble | | — @ | 8 |
| Tin crystals | | 15 @ | 16 |
| Turmeric root, Alleppy | | 3 @ | 3½ |
| Bengal | | — @ | — |
| Corrings | | 3 @ | 3¼ |
| powdered | | 5 @ | 6 |
| Ultramarine, imported | | 20 @ | 30 |
| American | | 5 @ | 16 |
| Vanadiate, ammonium | oz. | 90 @ | 1 00 |
| Woad, English | | 9 @ | 10 |

**Coal Tar Colors:**

| | | | |
|---|---|---|---|
| Alizarine | | 19 @ | 21 |
| Aniline oil | | 18 @ | 24 |
| salt, crystals | | 16 @ | 18 |
| cake | | 20 @ | 21 |
| Bismarck brown | | 50 @ | 75 |
| Eosine | 2 | 40 @ | 3 00 |
| Fast red | | 50 @ | 65 |
| Fast yellow—acid | | 75 @ | 1 50 |
| Fuchsine crystals | 1 | 25 @ | 1 75 |
| Hoffman's violet—3B | 1 | 75 @ | 2 50 |
| Methylene blues | 4 | 50 @ | 6 75 |
| Methyl violets—2R | 1 | 50 @ | 2 00 |
| 2B | 1 | 50 @ | 2 00 |
| B | 1 | 50 @ | 2 00 |
| Nicholson (alkali) blue—3B | 2 | 25 @ | 3 00 |
| 5B | 3 | 75 @ | 4 00 |
| Red shade | 2 | 00 @ | 2 25 |
| Nigrosine | 1 | 00 @ | 2 00 |
| Orange A—II | | 40 @ | 65 |
| Safranine | 1 | 75 @ | 2 25 |
| Scarlet R | | 45 @ | 55 |
| RR | | 50 @ | 65 |
| RRR | | 70 @ | 75 |
| Soluble blue—green shade | 2 | 00 @ | 3 50 |

These prices are for colors of standard purity in original packages. Reduced colors can be obtained at irregular and very much reduced figures.

**Chipped Dyewoods, Etc.:**

| | | | |
|---|---|---|---|
| Barwood | ℔ lb | 1¾@ | 2¼ |
| Camwood | | 4½@ | 8 |
| Fustic, com | | 1¾@ | 1¼ |
| Cuban | | 1½@ | 1⅝ |
| Green ebony | | 3½@ | 4 |
| Hypernic | | 3½@ | 4¼ |
| Logwood, Campeachy | | 2 @ | 2⅜ |
| Laguna | | 2½@ | 2¾ |
| Nicwood | | 2 @ | 3 |
| Peachwood | | 3½@ | 3¾ |
| Quercitron | | 1½@ | — |
| Redwood | | 2 @ | 3 |
| Red sanders | | — @ | 3 |

**Extracts:**

| | | | |
|---|---|---|---|
| Archil | ℔ lb | 18 @ | 20 |
| concentrated | | 21 @ | 25 |
| Black oak | | 23½ @ | 23¾ |
| Barberry, French | | 28 @ | 30 |
| Chestnut | | 3½@ | 4 |
| Chestnut oak | | 3½@ | — |
| Refi'd sedimentless hemlock | | 4½@ | 6 |
| Prime hemlock | | 2½@ | 3 |
| Fustic, solid | | 10½@ | — |
| liquid, 51 deg | | 7½@ | 9 |
| Indigo extract | | 7½@ | 14 |
| Logwood, solid | | @ | 9½ |
| liquid, 51 deg | | 6½@ | 6¾ |
| 42 deg | | 5½@ | 6 |
| Persian berries, French | | 24 @ | 26 |
| Sumac Extract | | 3¾@ | 6¾ |

## COMPARATIVE PRICES.

| | 1888. | 1887. | 1886. |
|---|---|---|---|
| **Chemicals.** | | | |
| Bleaching powder | 1 85 | 1 95 | 1 55 |
| Caustic soda, 70% | 2 15 | 2 35 | 2 50 |
| Caustic soda, 60% | 2 30 | 2 52½ | 2 70 |
| Sal soda | 95 | 97½ | 85 |
| Soda ash, 48% carb | 1 22½ | 1 22½ | 1 25 |
| Soda ash, 48% caustic | 1 22½ | 1 20 | 1 25 |
| Soda ash, 48-58% N. C | 1 22½ | 1 10 | 1 27½ |
| Soda alkali, 58% B. M | 1 12½ | 1 20 | 1 20 |
| Soda nitrate | 2 05 | 1 77½ | 2 15 |
| Brimstone | $19 50 | $18 00 | 21 00 |
| Cream tartar | 32 | 34¼ | 34¼ |
| Muriate of potash | 1 80 | 1 70 | 1 68 |
| Chlorate of potash | 14½ | 15¼ | 16½ |
| Kainit | 9 50 | 7 25 | 6 90 |
| **Paints.** | | | |
| White lead in oil | 5½ | 6¼ | 7 |
| Litharge | 5½ | 5½ | 5½ |
| Paris green | 18½ | 18 | 16 |
| Orange mineral | 8 | 7¾ | 8 |
| Ven. red, English | 1 40 | 1 40 | 1 40 |
| Ven. red, American | 1 00 | 1 00 | 1 00 |
| Barytes | $16 00 | $16 00 | $18 50 |
| Whiting, Commercial | 45 | 45 | 36 |
| **Drugs.** | | | |
| Opium | $2 70 | $4 40 | $2 75 |
| Morphine, domestic | 2 10 | 3 10 | 1 80 |
| Quinine, German | 33 | 38 | 48 |
| Quinine, domestic | 43 | 40 | 50 |
| Cinchonidia, domestic | 5 | 8 | 8 |
| Alcohol | 2 20 | 2 03 | 2 12 |
| Borax, city | 8½ | 6¼ | 6¼ |
| Beans, tonka (Ang) | 1 30 | 1 35 | 1 55 |
| Cubebs | 1 50 | 1 00 | 75 |
| Cuttlefish | 20 | 12½ | 12¼ |
| Glycerine, American | 16½ | 19½ | 15½ |
| Oil, castor, city cs. | 14 | 17 | 17 |
| Oil, codliver, Nor | 22 50 | 27 00 | 25 00 |
| Quicksilver | 56 | 53½ | 50 |
| Oil, bergamot | 2 30 | 2 37½ | 2 00 |
| Oil, cassia | 70 | 66 | 62½ |
| Oil, cubebs | 14 00 | 10 00 | 8 00 |
| Oil, peppermint, tins | 1 95 | 2 10 | 2 75 |
| Oil, sassafras | 53 | 43 | 35 |
| Aloes, cape | 5¾ | 5¾ | 7 |
| Asafœtida | 8½ | 9 | 11½ |
| Gum arabic, 1st picked | 84½ | 92½ | 82½ |
| Gum arabic, sorts | 52 | 57½ | 39 |
| Camphor bbls | 24 | 22½ | 23 |
| Shellac, D C | 20 | 17½ | 18 |
| Senna, Alex. Nat'l | 24 | 29 | 27½ |
| Senega So | 38 | 27 | 52 |
| Golden Seal root | 20 | 18 | 13 |
| Ipecac | 1 75 | 1 25 | 82½ |
| Canary seed, Smyrna | 2½ | 2½ | 2⅝ |
| Caraway seed, Dutch | 5½ | 8¼ | 7 |
| Coriander, English | 4½ | 5 | 5 |
| Mustardseed, Cal. yel | 3½ | 4½ | 5¾ |
| Mustards'd, Trieste, br | 4¾ | 7 | 5½ |
| Rapeseed, English | 3 | 4 | 4½ |
| Rapeseed, German | 3½ | 3¾ | 4 |
| **Oils.** | | | |
| Linseed, domestic | 53 | 46 | 43 |
| Cottonseed, prime S. Y | 49 | 40 | 40 |
| Olive, Sicily | 68 | 68 | 77 |
| Cocoanut, Ceylon | 5⅞ | 5½ | 5½ |
| Lard, prime city | 66 | 54 | 53½ |
| Menhaden, prime cde | 25 | 20 | 21½ |
| Whale, bleached win'r | 42 | 40 | 41 |
| Sperm, bleached win'r | 72 | 71 | 85 |
| Paraffine, 25 gravity | 10¾ | 8 | 9 |
| Black, 29 gr. 15° | 8½ | 8 | 7½ |
| Oil cake, western | 23 50 | 21 75 | 25 50 |
| Spirits turpentine | 30¾ | 32½ | 34½ |
| **Dyestuffs.** | | | |
| Cochineal, Teneriff S | 30 | 30 | 30 |
| Cutch | 6¼ | 7¾ | 6¾ |
| Gambier | 6¾ | 5½ | 4⅝ |
| Indigo, Bengal h grade | 1 25 | 1 25 | 1 45 |
| Bichromate potash | 10½ | 10½ | 9⅞ |
| Prussiate potash, yel | 19 | 19 | 19 |
| Sumac, Sicily prime | 57 00 | 70 00 | 72 00 |
| Starch, west'n corn bls | 2⅞ | 2⅝ | 2⅞ |


# SMITH & KLINE CO.,

PHILADELPHIA.

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**Manufacturers,**

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We are the Exclusive Wholesale Agents for:

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THE ALBERT DICKINSON CO.
Dealers in Timothy, Clover, Hungarian, Millet, Red Top, Blue Grass, Lawn Grass, Orchard Grass, Pop Corn, &c.
Specialties: FLAX SEED and BIRD SEEDS.
Warehouses: 115, 117 & 119 Kinzie St., 104, 106, 108 & 110 Michigan St. OFFICES, 115 KINZIE ST., CHICAGO ILL.

**LIEBMAN & BUTLER.**
IMPORTERS OF
BRIMSTONE,
58 Stone St., New York

**F. E. McALLISTER,**
**Seed Merchant and Importer**
No. 22 Dey St., New York.
Canary, Rape and Hemp Seed, Mocking Bird Food, Mixed Bird Seed in cases, Bird Gravel, &c.

Established 1836.
**CROTON LABORATORY,**
OFFICE, 26 CEDAR ST., N. Y.
**J. B. Hendrickson,**
IMPORTER AND REFINER OF
Crude Saltpetre and Nitrate of Soda
Best qualities always on hand at lowest cash price.

**JOHN J. THOMSEN,**
16 & 18 W. German, & 23 W. Baltimore St
BALTIMORE, MD.,
IMPORTER AND EXPORTER OF
**DRUGS,**
AMERICAN INDIGENOUS
OILS, ROOTS, BARKS, HERBS,
A SPECIALTY.

The stand is only a small one, but is very effectively arranged, the exhibit looking attractive and tarteful.

There are about half-a-dozen firms exhibiting more purely pharmaceutical products, but, to tell the truth, they would have done better to have stayed away altogether rather than have shown so plainly and successfully how not to do it.

Switzerland is also not very strongly represented, but has at least some exhibits of interest to pharmacists. Amongst them are the exhibits of one of the most enterprising chemists Switzerland possesses. The whole display is a very good one, and the products could compete favorably with those of the most eminent French firms, and if visitors would take heed of the lesson taught at this stand they would learn a good deal. We have furthermore a few peptones and pepsin preparations, but nothing need be said of them; they are more than abundant everywhere.

There is also to be seen such products as sugar of milk, lactic acid and salts, &c., at which we need not be surprised when we remember what an important member of Swiss commerce milk is.

Getting further towards the Mediterranean we come to Italy, where we observe the exhibit of an Italian quinine factory. They present any amount of cinchona alkaloids and salts, even the rarer secondary products, also fine materia medica specimens of cinchona bark, and the spokeshaves used for making the shavings of the barks.

We have also here some houses exhibiting essences, such as bergamot and lemon, articles we naturally expect from a country so bountifully treated by nature as Italy. Sulphur and its preparations are to be seen here, while we have further a good display of boracic acid, and the salts thereof, including borax.

Everybody must confess that the Spanish-speaking countries form a very important factor of the whole Exhibition, although the mother country Spain is not so well represented as is the case with Spanish South America.

The Spanish Section has some interesting exhibits, enabling us to form a just estimate of the position the industry and art of the country have attained. If we examine the exhibits connected with pharmacy we find that the country does not possess any striking invention or great chemical discovery in its section, though on the other hand the specialties and pharmaceutical preparations of many of the exhibitors are of a satisfactory standard.

Considering the favorable position of Spain, and the bountiful way in which she is treated by nature as regards climate, it is to be regretted that the Spaniards are not going in so largely for this branch of commerce, and I feel sure that it would be greatly to their advantage to bring these goods more under the notice of the merchants of other countries. Cream of tartar is of course shown, but not so largely as I should have expected from such a wine producing land. Though it is an important feature of the trade of Spain, and so many reasons are manifest why this grape product, if I may so term it, should be a common trade article in Spain. one firm practically stands alone in exhibiting it.

Portugal is much better represented than Spain, and all the different exhibits have a much better finish and finer appearance, showing that the Portugese pharmacists are more progressive and desirous of improving their condition.

We find in this section a fair number of pharmacists who have a very fine show, some even having articles which are not to be found elsewhere. Of the 29 names given in the official list under class 45, I have first to call attention to the stand where are to be seen some excellent drugs and particularly herbs. The latter are neatly packed in squares, in a compressed state, so that they can be sold direct over the counter. This method of compressing herbs for sale is well known and largely utilized in the United States, and yields a moderately high profit. There are many minor ailments that can be most successfully treated by means of herbs, and such packages, which could in many instances be made sufficiently small to retail at a penny, would be a useful addition to English chemists if they would take the matter up and try to develop it.

We also find in this section chemicals of a very high standard. One exhibitor also displays some extracts. Portugal also shows a good many patent articles and specialties of which there is nothing much to note, except that they are very handsomely got up and have no resemblance to quack products. The difference in quality and appearance between the Portuguese and Spanish exhibits is surprising, as one would have expected Spain to have at least attained as high a standard in medicaments as the adjacent country, especially as they are in a great measure rivals.

That the Portuguese are good business men is evident from the manner in which the few representatives present endeavor to introduce their wares to the public. One gentleman, who was eulogizing his product to me for some considerable time, was very desirous to convince me that his specialty, which bears a picture of the inventor, is one of the most important articles of commerce and of exportation of the whole country. From the healthy look of this gentleman I was quite convinced, however, that he at least had never taken the remedy he appraised so highly.

Both Roumania and Servia are represented pharmaceutically, but while we have in the department allotted to Servia, nothing but patent medicines and specialties of very obscure character and very low standing, we have from Roumania some better class exhibits, especially some excellent articles for the toilet, and also some very good samples of capsules. There is one house in particular which has a very tasteful display of tooth powders, elegantly put up with very handsome labels and attractive titles. The same firm also shows many other high class articles.

Servia shows a few drugs which are not likely to be very instructive to the pharmacist, unless it be as a means of improving his knowledge of the Servian tongue, apparently a most euphonious one if we may judge from the names of some of the drugs. Male fern root, for example, revels in the cognomen of nawaka, and Herba centauri is called kitchitza. Among the exhibits we notice alkanet root, Spanish pepper, and also a small greyish ill-favored salep.

Bulgaria has only one exhibit that may be described as pharmaceutically interesting, viz., the display by a large firm of attar of rose distillers.

Greece is also very slightly represented, and in no way so that we can obtain any fresh information. There are some very bad patent medicines, all of an extremely common character and appearance. We also find a few sponges, far removed, however, from the standard we should expect to see in this line from such a country, as is also the case with the few samples of beeswax exhibited, which are of a most unattractive appearance.

## Texas on the Mexican Lead Ore Question.

The Southwestern Mining Association, representing the mining interests of Texas, Arizona and southern New Mexico, besides American miners in Mexico, has adopted the following resolutions in reply to the series of resolutions passed by the Colorado lead men, which were published in a recent issue of the REPORTER:

WHEREAS, At the instance of the lead monopolists of Colorado, a meeting of citizens was recently held in Denver, the object of which was to protest against the free importation of lead ores from Mexico and other countries; and.

WHEREAS, It is the manifest aim of these monopolists to encourage public opinion demanding the repeal of the law now fixed on such importations, and reversing the resolutions heretofore made by different Secretaries of the Treasury, by which the introduction of such ores from Mexico has made the exchange of commodities with that country a source of profit and advantage; and

WHEREAS, Such resolution seeks to break down and destroy the smelting interests of the southwest by denying the importation of fluxing ores essential to the smelting of dry and refractory ores, which are the products of Texas, New Mexico and Arizona; and

WHEREAS, The further growth and prosperity of the southwest, already well advanced, will continue to remain independent on the commercial relations now subsisting between Mexico and the United States; and

WHEREAS, To insure a continuance of this prosperity, and encourage the growth of that section, every channel of trade for the importation of Mexican ores to be employed in payment for the exportation of American products and manufactures should be kept open and constantly widened by legislation; and

WHEREAS, That section, with its many new and well equipped smelting plants, and Mexican silver lead ores introduced free of duty, possesses ample conditions and facilities for the profitable reduction of its own ores, thereby saving from waste a large per cent on account of the treatment of dry and refractory ores and the freight thereon to the smelters in Colorado; therefore

*Resolved*, That on behalf of the mining interests of Texas, New Mexico and Arizona, we condemn the methods and aims of the Colorado men, and claim from the government of the United States protection and equal rights.

## The Kane Natural Gas Fields.

The pressures of the wells vary from 300 to 1,200 to the square inch, and the flame produced from the gas is celebrated for its intense heat, melting almost every substance. Nowhere else is it possible for the manufacturer to get in such close proximity to as many large gas wells, and this is a great item in favor of the Kane industry, since the pipeage of the vapor has increased in price considerably at other points. According to the circular of the Kane Board of Trade the economy from natural gas results from the following causes:

"First—The prime cost is from one-tenth to one-fourth that of any other fuel, according to quantity used. Three cents per thousand cubic feet is a paying price for quantities.

Second—It reduces cost of labor, dispenses with stokers and others needed to supply fuel and remove ashes.

Third—It saves the waste of material in all stages of manufacture, so frequently spoilt by insufficient or excessive heat, the mere turning of a throttle converting a raging blaze into a feeble flicker.

Fourth—For the same reason it saves the time wasted waiting for a proper heat, or to get up steam.

Fifth—As there are no clinkers, ashes or other residue, it never is necessary to shut down work and clean out furnaces.

Sixth—No storage room is required for fuel.

Seventh—No sparks, embers or ashes set buildings on fire. At night all fires can be extinguished as the workmen leave. Or they may be left to burn steadily all night without attention."

Two charted gas companies supply the citizens with fuel at the monthly rate of $1 per stove with heating stoves free from May 1 to September 1. To large consumers special rates are granted, and should extensive manufactures prefer to do so they can drill wells of their own with a reasonable certainty of abundant supply. The cost of sinking a well is about $2,000, and the expense of one completely equipped, ready for uses and including all mineral rights, will not exceed $3,500. A number of gas wells drilled by persons in quest of oil, can be purchased for $500 and upwards, and piped to the factory for about 13c per foot of distance.—Pittsburgh *Gazette*.


VICTOR REMEDIES CO.,
MANUFACTURERS OF
Victor Liver Syrup. Victor Pain Balm,
" Infant's Relief " Lung Syrup,
" Liniment, " Liver Pills,
" H.&C. Powders, " Poultry Powders
Correspondence solicited with the Jobbing and Export Trade.
FREDERICK, MD. U. S. A.

LEO BERNARD & CO.
PURE OIL OF ROSE.
One Ounce of our L B C warranted Pure Oil of Rose. Sent free to any part of the U. S. on receipt of $5.56.
SPECIAL PRICE FOR QUANTITY.
228 Pearl Street, NEW YORK.
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ESTABLISHED 1757.
SOZIO & ANDRIOLI,
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Steam works at Grasse, France.
MANUFACTURERS OF
MATERIALS FOR PERFUMERS & SOAP MAKERS.
Specialties:
Pomades No. 36, extra strong.
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Neroly bigarade. Geranium, twice rectified
Geranium—true African. on Roses.
Patchouly Oil. Lavender, Mt. Blanc.
Rhodium. Thyme.
Palommier—A new oil for Soap-makers.
Makers of the celebrated Orris-Root-Oil, Crystallizing at +15 Reamur.
and of the true Ambrette-Seed Oil.
BEST BRAND OF ROSE AND ORANGE FLOWER WATERS.
For Samples, Quotations and all particulars apply to:
Liebman & Butler,
93 Pearl & 58 Stone St., New York.
Our Sole Agents for the United States and Canada.

WOLF, RABE & CO'S.,
FINEST GUARANTEED GENUINE ESSENTIAL OILS:
LEMON, BERGAMOT, ORANGE.
Shipments of this old established and responsible house, may be relied upon to prove as represented.
Sole Agent, G. VILLARI, 55 BEAVER ST. NEW YORK
Quotations and samples on Application.

# Herf & Frerichs Chemical Co

**Manufacturing Chemists,**

## St. Louis, Mo.

MANUFACTURERS OF

Acetanilid, Acetic Acid,
Subnitrate Bismuth, Sulphuric Ether,
C. P. Acids, Iodoform,

## HYDROCHINON,

Acetate Potash, Cyanide Potash.
Sulphate Zinc, Sulphite Soda,
Phosphate Soda, Pyrophosphate Soda,

*AND A GENERAL ASSORTMENT OF*

Pharmaceutical, Photographic & Technical Chemicals.

EASTERN AGENTS,

**Schoellkopf, Hartford & Maclagan, Limited,**

3 Cedar St., NEW YORK. 103 Milk St., BOSTON.

## BORAX and BORACIC ACID.

ALL GRADES.

CALIFORNIA MEDICINAL HERBS AND BARKS as follows:

Cascara Sagrada, Yerba Santa, Grindelia Robusta Damiana.

THE CHEMICAL IMPORTING & MFG. CO., 23 Cedar St., New York.

## Jarrow Chemical Company,

**NEWCASTLE ON TYNE.**

Bleaching Powder, Carb Soda Crystals,
Caustic Soda, Soda Ash, all tests,
Sal Soda Bi-Carb Soda

**Edward Hill's Son & Co., Agents,**

25 & 27 CEDAR STREET, NEW YORK.

## WING & EVANS,

Commission Merchants,

54 WILLIAM STREET, NEW YORK.

Soda Ash, Sal Soda, Caustic Soda, Bleaching Powders.

AGENTS FOR

**BRUNNER, MOND & CO.**

**SOLVAY PROCESS CO.**

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## JAMES LEE & CO.

COMMISSION MERCHANTS,

72 PINE STREET, NEW YORK.

IMPORTERS OF

Soda Ash, Caustic Soda, Sal Soda, Bleaching Powder
Salt Cake, Oxide Manganese, Chloride Manganese,
Potash Alum, Sulphate Morphia,
Carbonate Potash, Hyposulphite of Soda.

SOLE AGENTS IN THE UNITED STATES FOR

**Charles Tennant & Co.,**

## Edward Hill's Son & Co.,

**25 and 27 Cedar St., New York.**

ustic Soda, Caustic Potash, Cocoanut Oil, Ceylon.
Bleaching Powder, Carbonate Potash, Cocoanut Oil, Cochin.
Soda Ash, Chlorate Potash, Palm Oil,
Carbonated Crystals, Citronella, Fisher's Brand
Sal Soda, **ARSENIC.** Cookson's Ven. Red,
Bicarb Soda, Orange Mineral,

Blundell, Spence & Co.'s Paints and Colors.

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**ESSENTIAL OILS,**

LEMON, BERGAMOT AND ORANGE, GUARANTEED PURE.

# PURE ALKALI.

## Manufactured by the Ammonia Process.

This Alkali contains 58 per cent. of Alkali or nearly 99 per cent. of Carbonate of Soda. It is the most economical form of Soda for Manufacturers of Soap, Glass, Paper, Wood Pulp and Colors, and for Printers and Bleachers.

CRESCENT BRAND TRADE B.M.&C.o MARK.

MANUFACTURED BY

## BRUNNER, MOND & CO.,

LIMITED,

NORTHWICH, ENGLAND.

AND

## SOLVAY PROCESS CO.,

SYRACUSE, NEW YORK.

CRESCENT BRAND TRADE B.M.&C.o MARK.

TRADE MARK

THE SOLVAY PROCESS CO. will make by this same process an Alkali adapted for Window Glass Makers testing 48 per cent.

## WING & EVANS, 54 WILLIAM STREET, NEW YORK,

Sole Agents for the United States.

WING & EVANS have appointed as exclusive Sale agents,

Messrs. LINDER & MEYER, BOSTON, for New England States who are prepared to contr. for future delivery

## CHEMICAL MARKET.

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 50.*

TUESDAY EVENING, Aug. 27, 1889.

Taking the chemical market as a whole, there is little of special interest to record. The heavy goods alone present very notable features, which, however, are more in the nature of a reflex of the conditions prevailing abroad than the result of any particular activity in this market. There is a healthy trade in progress but it is entirely devoid of speculative interest for while consumers are quite free to supply current wants they cannot be induced, even in the face of a prospective large advance, to anticipate their future requirements. From the other side come reports that the manufacturers have as yet failed to come to an agreement on the question of restricting production, but that the prospects of an early settlement of the matter are brighter than at any time since the first efforts in this direction were made. All of the manufacturers, with one important exception, are pledged to the scheme fon regulating the output described in previous issues of the REPORTER Efforts are now being made to overcome the objections of this outside maker, and secure his consent to entering into a agreement to be presented at a meeting of the manufacturers next month. If he will not join the combination it will be organized on the proposed lines without him, In the mean time it is reported that the production, particularly of soda ash, is steadily diminishing and hence the firmer feeling here and abroad. Our Liverpool correspondents, Messrs. J. P. Brunner & Co. writes us on the 14th inst.:

"There is no new feature to report in the line of heavy chemicals; prices continue steady and a moderate business is passing. There are few inquiries to report from the States for soda ash, but some makers report a somewhat better demand from other quarters for both caustic and carbonated ash, and in some cases a shade more money is asked. We quote: Caustic ash 48% 15-16@1 1-16d; high test, 31-32@1 1-32d; carbonated ash 48%, 31-32@1 1-16d, and high test, 31-32@1 1-32d. Soda crystals are quiet at £2 10s, but there is no pressure to sell, most makers being well filled with orders. Caustic soda is only offered to a limited extent and higher prices are paid. It is now difficult to find any sellers for prompt and August delivery, but possibly later on in the month some resale parcels may come on the market. Quotations to-day are, 60%, £5 17s 6d @6; 70%, £6 15s@7; 74%, £7 10s, and 76%. £8@8 5s. Bleaching powder is in moderate request, and sales are reported to-day for America at £6 17s 6d and £7. The demand is not active, but at the same time values are well maintained, as there is very little hardwood offering, owing to the difficulty in procuring shooks, which compels most makers to pack only in softwood packages. Chlorate of potash is a little off, and business has been done at 4½d, although most makers hold for 4¾@5d. Bicarb soda unchanged at £4 12s 6d@4 15s per ton for one cwt kegs, according to brand and quantity, with usual allowances for large packages."

### Heavy Chemicals.

Carbonated soda ash 48% is in very good demand for prompt and early delivery but as a rule buyers confine their purchases to actual requirement. The tone of the market is firm in sympathy with foreign advices, and the comparatively limited supply here make holders indifferent sellers. In a large way nothing better than 1 22½c can now be done, and for moderate sized parcels up to 1 25c is demanded, From store, in a jobbing way, 1 27½@1 32½c is paid according to quantity and brand.

Caustic soda ash is firmer, though without quotable change. Cables from the other side report that an accident happening in one of the large works has caus d a temporary shut down. Another large firm has permanently abandoned this branch of alkali manufac. ture, and the restriction of production thus caused is likely to create a great scarcity of supplies for some time to come. The stock here is in small compass, and there is little on the way, as the offerings from the other side have been limited for some time past. While until recently some disposition was shown to shade 1 2½c on large orders, and some business was done, we understand, at about 1 17½c, there is now nothing to be had below the first mentioned figure, either on the spot or to arrive. In carload lots 1 22½@1 25c, as to brand and seller are the general quotations, and for jobbing parcels from store 1 27½@1 30c as to quantity, appear to be bottom figures.

Alkali is without change. A firm feeling exists and with a continued good demand for spot and future delivery prices are maintained at 1 20@1 22½c for 48% and 1 12½@1 15c for 58%, There is little or no inquiry for 36% and prices are entirely nominal.

Caustic soda is reported to be in good demand by some dealers while others find only a moderate inquiry. Buyers are evidently not impressed by the reports in circulation regarding the prospect of much higher prices in the future, and while there are some sales making for delivery during the next two or three months, there is nothing like speculative interest manifested by either dealers or consumers. The firmness which has characterized the spot market for some time past continues to be a marked feature of the situation, and 2 20@2 22½c for 74% and 2 22½@2 25c for 70% are the bottom quotations for large lots, here or to arrive.

English sal soda is working into a better position. The demand is improving, but as yet hardly exceeds jobbing proportions. The supply here is small and there is not much on the way, owing to the restriction of production during the warm weather. Sales are reported on the spot at 90@1c as to quantity and seller, while for arrival 85@90c is asked. American is also in better request, and the market remains firm at the late advance.

Bleaching powder is about the only article on the list that presents a dull appearance. Competition between local dealers prevents the improvement which might be expected as a result of the firmer tone of foreign advices, and while 1 75@1 85c, as to quantity, are the nominal quotations, we understand that 1 70c has been accepted for stock from dock, and that that price will still be accepted by some holders.

### Acids.

Acetic acid continues in moderate jobbing request, with prices without alteration and the market wholly without interest.

Muriatic and nitric acids have been in fair request for the season, and dealers find no special cause for complaint in the volume of business doing. Prices have not been further changed.

Oxalic acid has ruled quietly steady, the market being featureless, at former figures.

Sulphuric acid,—This article has sold in fair quantities for consumption, but no special life can be noticed in the market. The meeting of the acid manufacturers on Wednesday, passed off quietly, and it is said that owing to the absence of several of the leading spirits, nothing of special interest was discussed, but were left for future consideration. The next meeting will be held on September 4. Prices are without change.

Tartaric acid has been in only moderate request at former figures, with the market totally bare of items of interest.

### Miscellaneous.

Acetate of lime has also been in moderate request with previous rates quoted in all instances and the market without feature.

Blue Vitriol—No change in previous quotations can be noted, while in the matter of trading, nothing of any moment has transpired.

Brimstone continuer to drag, but few transactions being reported, and then only in a small way. We are unable to note any changes in the nominal quotations.

We are indebted to Mr. Gaetano Ainis, of Messina, for the following exports of brimstone during July, 1889:

FROM GIRGENTI.

| | 2nds. | 3ds. |
|---|---|---|
| Str Mashal Andr., to Lansuvelle | 464 | .... |
| Bg Ercole, to Charleston | ... | 500 |
| Str Letimbro, to New York | 1,000 | 500 |
| Str Fili Prinzi, to Llanelly | .... | 800 |
| Do. do. to Swansea | .... | 300 |
| Str Palmyra, to London | .... | 400 |
| Str Liebenstein, to Stettin | .... | 1,300 |
| Str Entella, to New York | .... | 1,500 |
| Str Peconic, to Savannah | .... | 800 |
| Str Suez, to New York | .... | 200 |
| Str Penelope, to Rotterdam | 155 | .. |
| Str Transit, to Newfharwater | 847 | .... |
| Do. do. to Carlshamn | 400 | .... |


G. H. NICHOLS & CO.,
Manufacturing Chemists.
68 WILLIAM ST., NEW YORK.
Oil Vitriol, Muriatic Acid.
Sulphuric Acid, 98 per cent,
Alum, Sulphate of Soda.
Our Refined Oil Vitriol is the purest Commercial Acid made in the World.
LAUREL HILL CHEMICAL WORKS, Laurel Hill, L. I.
CAPELTON CHEMICAL WORKS Capelton, P. Q., Canada.

PHENIX CHEMICAL WORKS,
Oil Vitriol, Muriatic Acid.
ACETIC ACID,
Copperas, Sulphate Soda,
NITRIC ACID, AQUA FORTIS, MURIATE TIN, &c.
GRIDLEY & CO., Agents,
87 MAIDEN LANE, NEW YORK.

JOS. C. GAMBLE & SON,
ST. HELENS, Lancashire.
MANUFACTURERS OF
CHLORATE OF POTASH,
CHLORATE OF BARYTA,
CHLORATE OF SODA,
SULPHIDE OF SODIUM,
SODA ASH, CREAM CAUSTIC SODA
BLEACHING POWDER.
CROWN FILLER.

Natrona Bi-Carbonate of Soda.
(ABSOLUTELY PURE.)
NATRONA SODA TRADE MARK
The nature of the raw material from which NATRONA BI-CARBONATE OF SODA is made—viz.: Krvolith, a mineral containing pure sodium—insures a purity and uniformity of product which cannot be obtained from any other known material. In making Bi-Carb. Soda from any other raw material, the use of sulphuric acid is a necessity, but none is used in any part of the process of making NATRONA BI-CARB; hence its entire freedom from the slightest trace of arsenic, which is always present in ordinary soda. Its absolute purity and entire freedom from all traces of sulphate of soda, common salt, and other impurities, render NATRONA BI-CARB NEARLY TASTELESS, and, being bolted through the finest bolting-cloth, insures the finest state of division.
To these indisputable facts the attention of CONSUMERS of soda is specially called. They are IMPORTANT, and should influence both those who use and those who sell soda, to buy and sell NONE BUT THE BEST.
The NATRONA Bi-Carb Soda is kept in stock by almost every wholesale druggist and grocer throughout the United States, of whom it may be ordered.
*NATRONA BI-CARB. SODA IS UNEQUALLED BY ANY OTHER BRAND OF ENGLISH OR AMERICAN MANUFACTURE.*
Penna. Salt Manufacturing Co., Natrona Chemical Works, PHILADELPHIA, PA.

FAIRFIELD CHEMICAL CO.,
71 WALL ST., NEW YORK.
ACIDS
Mixed Acids for Nitro-Glycerine a Specialty.
WORKS AT BRIDGEPORT & NEW HAVEN CONN.

Acetic Acid. Brimstone. Oil Vitriol. Copperas. Sulphur. Manufacturers, Passaic Chemical Co., 254 PEARL ST., NEW YORK.

Atlantic Sulphur Works,
MANUFACTURERS OF
VIRGIN ROCK AND ROLL BRIMSTONE.
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Martin Kalbfleisch's Sons Co.,
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MANUFACTURERS OF
Oil of Vitriol, Nitric, Muriatic and Acetic Acids, Aqua Fortis, Aqua Ammonia, Muriate of Tin, Sulphate of Zinc, Alum, Tin Crystals, Blue Vitriol, Glauber's Salt, &c.
Mixed Acids for Nitro-Glycerine Makers.

BAUXITE
(Hydrate of Alumina-Alum Clay.)
LUMP AND GROUND.
IRISH HILL BRAND. Highest in Alumina, and Lowest in Iron produced. Best article wherefrom to Manufacture Alum, Sulphate of Alumina, Alum Cake, &c.
Mines and Mills Near Belfast and Larne.
THE BAUXITE CO., Limited.
PROPRIETORS.
SOLE AGENT,
GEO. G. BLACKWELL, 25, 26 & 27 Irwell Chambers, West Liverpool, England.
Specialties in Manganese, Barytes, Talc, Oxides, Rottenstone, Irish Moss, Emerystone, &c,

# GASKELL, DEACON & CO.,

**Alkali Manufacturers, WIDNES.**

In addition to their well known Chemicals, offer their more recent specialty and already highly popular form of Soda

# CRYSTAL CARBONATE

The Purest, Cheapest and most Soluble form of Crystallized Soda.

1 lb. Equal to 2 1-2 lbs. of Soda Crystals.

**J. L. & D. S. RIKER, AGTS.**

**45 CEDAR ST., NEW YORK**

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Importers of CHEMICALS, and Sole Agents for SCHERING'S and SAAMES'

## CHLORAL HYDRATE,

Salicylic Acid, Carbolic Acid, Pyrogallic Acid, Glycerine, Russian Isinglass, Paraldehyd, Etc., Etc.

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## ALONZO L. THOMSEN,

**Manufacturing Chemist,**

Works, Leadenhall & Winder Sts.. BALTIMORE, MD.

—EPSOM SALT, SAL SODA,—

IODIDE POTASSIUM, IODINE RESUBL., SULPHATE ZINC, CHEM. PURE ACIDS,

And a full line of other Chemicals.

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BROKERS AND COMMISSION MERCHANTS,

102 CHESTNUT STREET, PHILADELPHIA.

**Glass, Soap & Paper Makers' Chemicals, Essential Oils**

AGENTS FOR

GREENBANK CO., St. Helens. RUNCORN CO., Liverpool.

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BLEACHING POWDER. CAUSTIC POTASH. BORAX.
SODA ASH. CHLORATE OF POTASH CASTOR OIL.
CAUSTIC SODA. CARBONATE OF POTASH CAMPHOR.
SAL SODA. OXALIC ACID. OIL LEMON.
NITRATE OF SODA. BRIMSTONE. OIL BERGAMOT.

Finest Quality Philadelphia Quercitron Bark for Export.

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## LINDER & MEYER,

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AGENTS FOR THE UNITED STATES.

| | | |
|---|---|---|
| Bg Miranda, to Cardiff | | 250 |
| Cabotage | | 150 |
| Total, tons | 2,866 | 6,700 |
| FROM LICATA. | | |
| Bg Lucia, to Marseilles | | 276 |
| Sch Giustina, to Marseilles | | 223 |
| Str Pocasset, to New York | 1,524 | 500 |
| Str Robt Harraving, to Baltimore | 880 | 1,320 |
| Bk Archimede, to Batum | 660 | .... |
| Bg Emanuele, to Charleston | 500 | .... |
| Str Suez, to New York | 1,100 | 700 |
| Str Tomesk, to St. Petersburg | 842 | .... |
| Sch Carmelo, to Trieste | | 339 |
| Cabotage | 170 | 383 |
| Total, tons | 5,676 | 3,741 |

Cream Tartar—There continues an absence of interesting items in the market for this article, and no further changes in prices have been effected. The trading has been confined to small jobbing lots, and this is thoroughly in accordance with the views of the makers, as they do not appear anxious to sonsummate large contracts at present prices.

Nitrate of Soda—Dealers report rather an increase in the trading, though the same has been accomplished at prices which are said to be wholly unsatisfactory. While no immediate advance is looked for, yet dealers express themselves as of the opinion that the market will ultimately exhibit a better tone, as the same is indicated by the position of stocks.

### Ammonias, Potashes and Fertilizing Chemicals.

The market for fertilizing chemicals is still without activity, though a trifle better inquiry is reported. A prominent dealer of this city, who has just returned from the South, says that the reports from that section, as contained in recent advices which we quoted in a previous issue, have been greatly exaggerated as to the poor condition of the crops. He says that this state of affairs does exist in certain parts of Virginia, but that the other sections and States have had a prosperous season as regards crops. It is reported that at Charleston bay the fishing has been abandoned, owing to the fact that there are no fish to catch. At Barren Island the total amount of fish caught during the past three weeks has been 35,000, which have yielded but three tons of fertilizing material. Owing to the inclement weather, the Northern factories have not been able to dry, and most of it has gone into dry or acidulated guano. The fishing at the eastern end of the island has not been up to the average of last year, less guano being made up to date, than during the same period of 1888. The only changes in prices have been those for phosphate rock, the same having been advanced to $5 75 for undried and $6 75 for kiln dried.

Muriate of potash has continued to rule without feature. Fresh arrivals have been received, but the same will be delivered on contract and do not augment the market. Prices are unchanged.

Double Manure Salts.—Several large contracts are reported to have been made for lots for future shipment at our previous quotations of 1 15@1 20c, but beyond this, the market is in the same position as reported a week ago. High grade sulphate of potash has continued in moderate request at previous figures.

Kainit.—Sales are given us of two or three cargos at quotations, but nothing of any moment has occurred to disturb the market and firmer quotations continue to rule.

### Philadelphia Chemical Market.

PHILADELPHIA, Aug. 26, 1889.

The general market for English chemicals present no new features during the week under review. The firmness in some articles previously noted continues, but with no material change in figures as yet. Considerable more inquiry is noted, especially in glassmakers ash, but trade, while showing a slight improvement, is far from the activity that is usually noted at this season. The arrivals have been moderate, and mostly gone to fill existing contracts.

Carbonated soda ash, Liverpool 48% is quiet at the moment, although some little inquiry for future deliveries is noted. Sales on spot are reported at 1 30@1 37½c in a jobbing way. To arrive and for shipments 1 27½@1 35c is named as to brand and quantity.

Caustic soda ash 48% can be bought in a jobbing way on spot at 1 32½@1 40c. There is, however, but little demand to note. Shipments are held at 1 27½@1 32½c. Caustic soda 60% continues firm at 2 55@2 70c, and shipments are quoted at 2 52½@2 60c; 70% in jobbing parcels is quoted at 2 27½@2 37½c, and holders are not naming lower figures for round lots. Shipments are quoted at 2 22½@2 30c.

Sal soda is firm at 1 00@1 10c, and with limited supplies to draw upon. Shipments are held at 90@95c, and more inquiry is noted.

Refined alkali, 36%, is not in stock, at any rate in first hands. Solvay, 36%, can be had from store at 1 27½@1 35c, and to arrive at 1 17½@1 22½c. B. M., 48%, has arrived freely, but has all been placed from dock on contract, and the market for spot goods closes firm at 1 30@1 35. To arrive, 1 27½@1 32½c are the ruling quotations, and same figures apply to shipments. B. M., 58%, is scarce, and quoted at 1 27½@1 35c. To arrive, 1 25@1 30c is named, and shipments are held at 1 22½@1 25c, although on firm offer 1 20c might be accepted for round lots.

Bleaching powders from store are quoted at 1 85@1 97½c, and a fair jobbing demand in progress. To arrive, 1 80@1 90c is asked. Nitrate of soda is quoted at 2 10@2 25c from store, and shipments are held at 1 85@2c.

### Chemical Industry in Belgium.

The situation of chemical industry in Belgium must be termed unfavorable as regards the returns obtained. English competition and French protection duties prevent any improvement, though the low prices of products, and home competition is sufficiently keen to compel manufacturers to content themselves with low profits, and to seek larger returns by the production of greater quantities of the various materials.

Le Blanc's soda-process is now only carried out in one works, and there simply to work up their surplus sulphate, which they are prevented from selling as such by a syndicate of Belgian manufacturers, for the limitation of the sale of sulphate. This combination cannot force a rise in price, because in the event of this, the demand would be completely sup-


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plied with French goods. The price of calcined sulphate of soda varies between 3 francs and 4½ francs(2s 4½d—3s 6¾d) per 100 kilos. It is obvious that no great profit can be gained with these prices, even when sulphuric acid at 60° B is calculated at 3 francs, and coal costs at the most 10 francs (7s 11d) per 1,000 kilos, since a rise in sulphate is usually accompanied by a fall in crude hydrochloric acid. The production of sulphate amounts to about 15,000 tons, which is all used in Belgian glassworks for the manufacture of crude glass, window glass, and glass utensils. The numerous attempts to convert sulphate of soda into silicate in the process of glass-making, and recover the sulphuric acid, have remained without practical result, and even if successful would probably not pay, owing to the low price of sulphuric acid. Mechanical sulphate furnaces will scarcely be able to make way in Belgium, at all events until the contamination of the sulphate by iron is prevented, as this greatly diminishes the product for glass making. The demand for soda ash is completely supplied by English soda and Solway soda from the various Belgian works. Even with a cost price of 3 francs per 100 kilos. sulphate, less the sale price obtained for the hydrochloric acid, it is almost impossible to compete with the English Le Blanc soda, while the manufacturers are also prevented from taking it up by the high price asked for rotating black ash furnaces. The only advantage which Belgium could have over England in the manufacture of Le Blanc soda is cheapness of labor, a day's wages amounting to between 1·75 and 2·5 francs (1s 4½d—1s 1i¾d.)

The manufacture of hydrochloric acid is receiving much attention, especially the condensation of the acid. The quality is, however, on the average poor, partly because of the amount of arsenic in the sulphuric acid, and partly because the acid contains 3 per cent of sulphuric acid. The usual yield is about 200 per cent. of hydrochloric acid at 20° B in the salt used. The salt employed for the manufacture of the better qualities of sulphate is English salt (from brine), and the sulphate obtained contains 97 per cent. of $Na_2SO_4$. The lower qualities of sulphate are made from French rock salt, from Lorraine, containing only about 92 per cent. of salt and 3—3½ per cent. gangue, the sulphate produced being of 92 per cent. strength. The decomposition of the salt is always very complete, more than ½ per cent. of unaltered salt being never found in the sulphate, since this is very detrimental in glass making. In spite of the French duty of 2 francs per 100 kilos. of hydrochloric acid, about 10,000 tons are sent to France, the largest portion of which is used in Paris itself, reaching a price of 5—6 francs per 100 kilos. A smaller quantity is sent in bottles to Germany to be employed for the carbonization of artificial wool and for galvanizing or tinning iron wire or sheet. The price of hydrochloric acid in Belgium varies from 2—3 francs. The quantity of arsenic in it is usually considerable, on account of the arsenical pyrites employed, and varies between ·02 and ·04 per cent. A large proportion of the acid is employed in the country itself by numerous paper manufacturers for the preparation of chlorine for bleaching and in the production of bleaching powder

The manufacture of bleaching powder is only carried out on the large scale in one works, the Weldon regenerative process being employed. As long as the sale price of hydrochloric acid is more than 2 francs, profitable work cannot be thought of without the aid of Weldon's process, and the manufacturers are deterred from introducing it through fear of the magnesium chloride process, which is continually being brought to the front, and which makes the expensive Weldon plant appear to be a dead loss. English bleaching powder rules the market, but the Deacon process in Germany appears to be competing with it severely in Belgium.—*Chemiker Zeitung.*

## RECENT PATENTS.

409,230. PROCESS OF MAKING FERTILIZERS. Issued Aug. 20, 1889.

Claim.—1. The process herein described of manufacturing fertilizing material, consisting in concentrating the water resulting from rendering processes to a semi-liquid condition, and then mixing it with infusorial earth for the purpose and substantially in the manner described.

2. The process herein described of manufacturing fertilizing material, consisting in concentrating the water resulting from rendering processes to a semi-liquid condition, mixing the same with infusorial earth, and drying the compound thus formed, substantially in the manner and for the purpose described.

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409,382. AMMONIA SODA APPARATUS. Issued Aug. 20, 1889.

Claim.—1. In apparatus for the manufacture of bicarbonate of soda and other soda salts and compounds, the combination of an elevated salt water receiver and gasometer provided with a stand pipe for the gas, a boiler into which the water is run from said receiver, a series of settling pans in successive connection with each other and the boiler, an evaporating pan or vessel into which the brine is passed from the settling pans, and a cooler connected with the evaporating pan or vessel, for operation in relation with each other, substantially as specified.

2. In apparatus for the manufacture of bicarbonate of soda and other soda salts and compounds, the combination, with the settling pan, of the rotary agitator and washer, the drainer and the centrifugal drier, essentially as specified.

3. In apparatus for the manufacture of bicarbonate soda and other soda salts and compounds, the combination of the elevated salt water receiver and gasometer, with its supply pipe and gas pipe, the boiling pan or vessel, the settling pans, the evaporator, the coolers, and the series of air tight decomposing cylinders, provided internally with reversely rotating stirrers, and arranged one below the other and adapted to pass their charges one into the other substantially as described.

4. In apparatus for the manufacture of bicarbonate of soda and other soda salts and compounds, the combination with the decomposing cylinders, of the ammonia receiver, the carbonic acid gas receiver, the condensing pumps, the pipes and the cooler, essentially as specified.

5. In apparatus for the manufacture of bicarbonate of soda and other soda salts and compounds, the combination of the settling pan, the concentrating pan, the ammonia retort, the washing bottles, the ammonia receiver and the condensing pump, substantially as specified.

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409,384. COMPOUND DYE. Issued Aug. 20, 1889.

Claim.—1. The improvement in the manufacture of coloring matter, which consists in treating an aqueous extract of fustic dyewood with a slightly acid solution of a salt of one of the diazo compounds before mentioned—namely, diazo-benzene, diazo-toluene, diazo-xylene and diazo-naphthalene—adding the requisite quantity of alkali, and separating the coloring matter formed by mechanical means.

2. The improvement in the manufacture of coloring matter, which consists in treating the comminuted fustic dyewood with a slightly acid solution of a salt of one of the diazo compounds above mentioned—namely, diazo-benzene, diazo-toluene, diazo-xylene and diazo-naphthalene—until the wood is thoroughly permeated, and adding the requisite quantity of alkali, as described.

3. A coloring matter consisting of the combination of the active principle of fustic dyewood with a diazo compound, substantially as described.

## The Fixation of Atmospheric Nitrogen.

BY A. A. BRENEMAN, S. B.*

The great industrial problem indicated in the title of this article has been before chemists for half a century. It is doubtful whether there has been any real progress towards its solution since the ending of the first attempts to manufacture cyanides commercially and economically made by Possoz and Boissiere, at Newcastle-upon-Tyne, in 1844-1847. It would seem that the development of chemical theory within the same period should have thrown some light upon the more obscure points of the process, and the author has attempted in the following pages to define the present aspect of the problem, theoretically as well as practically. That the treatment is inadequate to the greatness of the subject he is fully aware. The limitations of his own time have made a fuller inquiry impossible at present. He can only hope that others may be led to follow up the subject more thoroughly. There is room for further experiment in this direction, both in the laboratory and on a large scale. The fixation of atmospheric nitrogen is an industrial problem to be compared with that involved in the manufacture of ammonia soda or of water gas, each of which passed through quite as discouraging an experience before attaining success as has, so far, been the lot of the nitrogen question. The question is still an open one, inviting further investigation. It has been taken up anew in recent years by Berthelot, from the theoretical side, and by Weldon from the industrial or practical side, and there is nothing in theory or practice at present to warrant the assumption that it is a hopeless question; in commercial importance it outranks either of the processes mentioned.

The matter given herewith relates principally to the preparation of cyanogen. The question of the synthesis of ammonia has been put somewhat in the background for lack of time and space. It is evident, however, that the fixation of atmospheric nitrogen in any one form is the solution of the general problem.

### PRUSSIAN BLUE.

The familiar coloring matter, prussian blue, was discovered about 1710, but the chemical substance cyanogen, the radical common to prussian blue and to a large series of complex substances now known to chemistry, was not isolated until more than a hundred years later. The name cyanogen (generator of blue) was given by Gay Lussac, in 1814, to the new substance which he found to be the characteristic ingredient of this blue and of compounds related to it. The familiar name of "prussiates," still applied in trade to the double cyanides of iron and potassium as well as the common name "prussic acid," by which hydrocyanic acid is known, bear evidence of the importance which the blue color originating in Prussia had early acquired as a commercial product.

Some time before the year 1710 a German manufacturer named Diesbach, working with the so-called Dippel's animal oil (commonly obtained by destructive distillation of bones, blood or other animal waste) happened, in handling a sample of this oil made from blood, to add to it a solution of potash (crude potassium carbonate) and obtained thereby a blue color. The process was soon applied upon a commercial scale. It was first described in a book called "Miscellanea Berolinensia," published in 1710, but the discoverer of the color was not known by name until mentioned by Scheele in 1731.

Woodward & Brown, English chemists, each published a paper in 1724 upon the new blue. Woodward refers to a German from whom he had received directions for preparation of the blue, but gives no name.

* The substance of this article was prepared as an appendix to a commercial report, but has not been printed heretofore in any scientific journal.—*Jour. Am. Chem. Society.*

The process, as reported by Woodward, consisted in deflagrating a mixture of saltpeter and argols (crude potassium bitartrate) and fusing the product with dried blood. The resulting mass was lixiviated with water and the solution was treated with copperas and alum, producing a greenish precipitate which on heating with hydrochloric acid, yielded the blue color which has since been known as Prussian or Berlin blue. Brown (loc. cit.) substituted animal flesh for blood in the process. He also suggested that iron was essential to the color of the new substance.

Geoffry, in 1725, proposed the use of woo and charred horn instead of blood or flesh Scheele in 1731 published the name of Diesbach as the original discoverer.

In later modifications the use of niter was abandoned and scrap iron was added to the mixture. The process as thus originated, is, in its essential features, that which exists today for the manufacture of potassium ferrocyanide from which prussian blue is made by precipitation with a ferric solution.

### POTASSIUM FERROCYANIDE.

Macquer first made ordinary yellow prussiate of potash (potassium ferrocyanide) in the crystalline form by treating prussian blue with a concentrated solution of caustic potash.

Beaume in 1773 proved the presence of iron in the same salt. The fact that iron was an essential ingredient of the salt remained for a long time unknown; as the proportion of iron varied in blue from different sources it was regarded as an impurity and many attempts were made to prepare a blue free from iron. Bertholiet (1800-1806) determined the iron quantitatively.

The researches of Gay Lussac, in 1814, first placed the composition of prussian blue and its related substances upon an intelligible basis by showing that they all contain the radical cyanogen, a compound of carbon and nitrogen (CN) which combines with hydrogen to form an acid and with metals to form simpler complex cyanides of which latter Prussian blue, ferric ferrocyanide, $(Fe_7(CN)_{18})$ is a good example.

This knowledge at once led to inquiries into the chemistry of the commercial manufacture of yellow prussiate of potash, a process which had previously been purely empirical.

The researches of Liebig led to the general theory at present accepted, namely, that potassium cyanide is the first product of the fusion of nitrogenous animal matters with potash and that the yellow prussiate found in the liquor after leaching the fused mass results from decomposition occurring between potassium cyanide and a compound of iron, generally ferrous sulphide, which is formed in the fused mass by action of metallic iron upon the sulphur of the animal matters. In proof of this view, potassium cyanide can be extracted by alcohol from the fused mass previous to the addition of water.

Muspratt, in 1820, obtained by direct lixiviation of the fused mass, crystallized yellow prussiate which had been obtained previously, by the method of Macquer, from Prussian blue.

Mackintosh, in 1824, used closed pots for fusion and applied mechanical stirrers.

Gautier suggested in 1827 and Gentele in 1836 practically applied the use of raw animal matter instead of charring it before fusion with potash as had been done previously.

Naumann in 1837 allowed the flame to play directly upon the fused materials.

Up to this time the large loss of nitrogen during fusion and the small yield of ferrocyanide with respect to the theoretical yield (never more than one-third, generally much less) seems to have attracted comparatively little attention. But the increasing demand for the prussiates in dyeing and the relatively greater cost of animal waste drew attention to the chemical problem involved in preventing this escape of nitrogen. It was found


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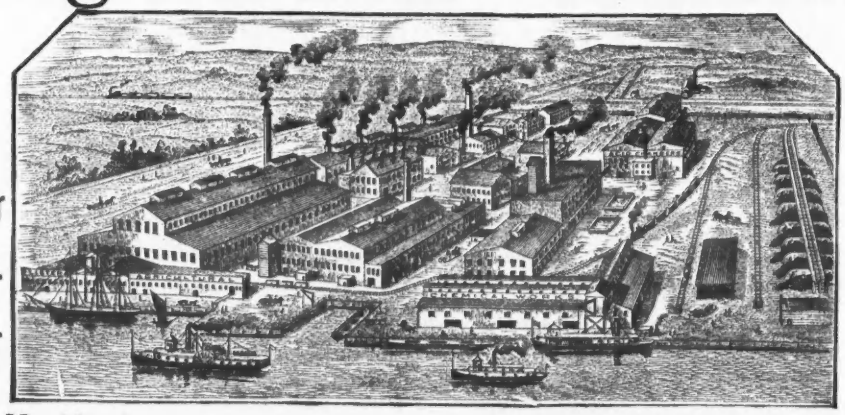

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that the nitrogen was volatilized largely during the fusion, as ammonia or organic bases, and the collection and utilization of these was attemped.

Kuhlmann in 1838 discovered that when ammonia was passed over red hot charcoal, cyanogen and ammon'um cyanide were formed and by using a mixture of charcoal and potash for absorption he obtained potassium cyanide.

The idea of obtaining cyanides by passing ammonia over hot carbon, however, was probably of earlier origin.

Jaquemyn, applying this idea, passed the vapors from the prussiate pots over hot charcoal to obtain cyanides, and Berry patented the same principles.

These facts relating to the conversion of ammonia into cyanides by the action of hot carbon are of interest as showing the development of chemical ideas upon the subject of cyanogen. They had their origin, however, mainly in the practical experience of the prussiate manufacture with its waste of nitrogenous vapors. Whatever interest they may have in connection with the history of the subject, they probably would not have led to the idea of atmospheric nitrogen as a source of cyanogen, except for another discovery originating also in an industrial process.

CYANOGEN FROM ATMOSPHERIC NITROGEN.

Zinken in 1813 had found a mass of fused salt mixed with carbonaceous matter in the lower part of a furnace at Rothehute, which he partly examined and supposed to be principally chlorides. Koch found a similar mass at Konihshute in 1819. Berthier also in 1826 remarked the presence of potassium carbonate as fused salt in the lower part of an iron furnace. No one seems to have tested these deposits or exudations for cyanogen until Dawes in 1835 announced the existence of potassium cyanide in them. No quantitative determination was made.

In 1837 Neilson first introduced the use of the hot blast at the Clyde iron furnances. Shortly afterwards, a peculiar exhudation of fused salt which hardened on reaching the air to a white, opaque mass was noticed upon the walls of the furnace near the boshes. The substance was regarded with much curiosity and it is related by Clark, who made the first analysis of the product, that its alkaline character was soon discovered by the workmen and that it was used by the wife of one of them, for a time, as a substitute for soap in washing clothes.

Clark's analysis showed it to contain potassium cyanide 43·4 per cent, potassium carbonate 45·8 per cent. No ferrocyanide was present. The mixture gave no blue color on addition of hydrochloric acid, but yielded a blue precipitate when ferrous sulphate (copperas) was added previous to the addition of the acid in excess. This furnace went on producing potassium cyanide for three years from this time.

Zinken and Bromeis found in the bottom of a hot blast charcoal furnace at Madgdesprung in the Harz a carbonaceous mass containing iron and lead and a saline matter, which, on lixivation, yielded the following potassium salts, namely, ferrocyanide, cyanide, carbonate, silicate and manganate. A similar substance was noticed by Redtenbacher in a hot blast furnace at Mariazoll in Styria. Potassium cyanide was produced so abundantly in this case that it was sold commercially for galvanic gilding. The substance was found at the light hole, where the gasses issue, and also in the pipe through which the gasses pass from the furnace to the stoves.

Bunsen and Playfair made an elaborate investigation of a furnace at Alfrefon which yielded cyanides. The production of the substance was so abundant that it was estimated to amount to 224·7 lbs. in twenty-four hours. A hole was made in the front wall of the furnace, two feet nine inches above the tuyere or blast pipe, and the gases from that point were drawn off through a pipe for examination. Fumes of potassium cyanide escaped with the gases and condensed in the tube. Cyanides were obtained only from the lower part of the furnace; above the boshes none were found. These chemists believed that cyanides were produced only at a temperature corresponding to that at which potassium oxide gives up its oxygen to carbon. In the higher parts of the furnace cyanogen acts as a reducing agent and is destroyed by oxygen from the ores. When cyanides fall as low as the tuyere, on the other hand, they are burned, according to these authorities, by the blast of air. The conditions necessary for their production, therefore, are a reducing (deoxidizing) atmosphere or presence of hot carbon, and a temperatnre of the degree above mentioned.

Gases down from the furnace, as described above, had the following composition: nitrogen 58·05 per cent., carbonic oxide 37·43 per cent., hydrogen 3·18 per cent., cyanogen 1·34 These figures correspond to nitrogen 79·2 per cent., oxygen 22·8 per cent. (instead of 20·08 oxygen corresponding to water found in the gases is deducted). There is evidently here a deficiency of nitrogen as compared with ordinary air. At two feet above the tuyere no oxygen nor carbonic acid was found in the gases.

R. F. Smith in 1845 found a compound oozing from the crevices of an old blast furnace at Kilmarnock, which on analysis yielded 21 per cent., potassium cyanate, 47·73 per cent.; potassium cyanide, 10·13 per cent. potassium carbonate.

A. V. Kerpely describes the escape of a quantity of fused salts, chlorides and cyanides, from the slag hole of the blast furnace of Also Sajo in Hungary, just before the escape of the slag.

The facts just given had an important influence upon chemical thought. The source of the large quantities of nitrogen combined in the cyanides thus obtained became a subject of active discussion. It was not at once admitted that the free nitrogen of the air could be taken into combination with carbon to form cyanogen under the conditions existing in the blast furnace. The tendency was, at first, rather to find the source of nitrogen in the fuel or in the ammonia of the air. But the answer was given in a series of accurate experiments which left no room for doubt, and the direct fixation of atmospheric nitrogen by hot carbon under given conditions has long been accepted as a fact in chemistry.

The paper of Bunsen and Playfair was read before the British Association in 1845, but to take up the discussion methodically we must go back a few years. As has been said, the production of cyanides in the blast furnace at once raised the question of the source of the combined nitrogen, and the problem suggested by the furnace was soon transferred to the chemical laboratory.

Lewis Thomson, of Newcastle-upon-Tyne in 1839 first proved that potassium cyanide is produced when coke, potash and iron filings are heated to a high red heat in contact with air, and he received the medal of the Society of Arts for his discovery. Priority is claimed for Defosses, who made a similar discovery about the same time at Besancon in France.

Fownes and Young also confirmed these statements in 1841, using carbon prepared from cane sugar and pure potash.

Erdmann & Marchand, however, in 1842 repeated Fownes experiments and reported that the process was uncertain and required very exact regulation of conditions to produce any cyanides at all. They concluded that no cyanogen is produced when the materials are perfectly dry.

Berzelius remarked that these results of E. & M agreed with the earlier results of Wohler, in that water was shown to be necessary to the reaction. It was suggested that water plays the part of an intermediary in the reaction, first forming ammonia which is then converted into cyanide.

Langlois discussed the question raised by Erdmann and Marchand. He made two experiments. 1. Moist, purified air was passed over a mixture of pure carbon and potash heated to high redness. Cyanogen was obtained. 2. Dry air under the same conditions also yielded cyanogen. The production of cyanogen in each case was tested by converting it into prussian blue in the solution obtained from the fused mass of carbon and potash. He found, however, that if a lead-glazed earthen tube were used instead of a porcelain tube, no cyanogen was obtained—lead in the glaze apparently decomposing cyanogen—and hs ascribes the errors of Erdmann and Marchand to this fact.

Bunsen and Playfair also attacked this question in their investigation above quoted. They passed nitrogen over a mixture of pure carbon and potash heated to high redness in a tube and obtained potassium cyanide. As the nitrogen was free from ammonia and the materials were chemically pure the origin of the nitrogen in the cyanide was placed beyond doubt.

Rieken by very careful experiments confirmed the conclusion of Bunsen and Playfair as to the formation of cyanogen from pure carbon and nitrogen at a high temperature. He obtained pure carbon by heating pure cane sugar and pure potash by igniting pure crystallized potassium bicarbonate. The mixture of carbon and potash was then put into a tube and heated to whiteness, and nitrogen, prepared from air, was passed over it. This nitrogen was prepared by passing air through strong sulphuric acid and then through calcium chloride—thus removing both ammonia and water—then over iron filings heated white hot in a gunbarrel and finally through the mixture of white hot potash and charcoal. The highest white heat was required and the previous heating of the nitrogen was found to be essential. When the temperature was below whiteness no trace of potassium cyanide was formed.

Delbruch added further to the weight of evidence in favor of the conclusion of Bunsen and Playfair. He showed that the direct union of carbon and nitrogen was incontestable and extended the limits of existing knowledge upon the subject by describing other related reactions in which cyanogen is formed. Nitric oxide and "potassium carbonic oxide" were shown to produce cyanogen when heated. Carbon dioxide mixed with ammonia, or even with nitrogen, when passed over hot metallic potassium, or ammonium carbonate kept in contact with fused potassium, also yielded cyanogen.

The fact of the direct union of nitrogen and carbon being settled and the practicability of carrying out the reaction on a commercial scale having been, in a certain sense, proven by the accidental phenomena of the blast furnace, attempts were made to build up a new manufacture, in which cyanides should be made direct from the nitrogen of the air.

The first patent taken out in England for manufacture of cyanides on the new principle was by A. V. Newton. A patent taken out in 1839 by John Swindells for the manufacture of cyanide might have come partly under the same head, as it involved the fusion of potassium or sodium sulphate, coal and iron in a reverberatory furnace. A portion of the nitrogen of the fire gases might have been taken into combination under these conditions as an alkaline carbonate is formed, but the process avowedly looked only to fixing the nitrogen of the coal as cyanide.

The specification of Newton especially prescribes that nitrogen from any source, but free from "oxidating substances" be forced through a layer of small pieces of charcoal saturated with "potashes" and heated to redness, the vapors containing cyanides to be absorbed by suitable liquids. He states that oxygen decomposes the cyanides at high temperatures; the necessity of excluding oxygen has always been recognized by other writers upon the subject as an essential feature of the process.

Newton used either charcoal, coal or coke, but preferred the former, in pieces the size of a hazelnut. The charcoal was saturated with a strong solution of potash and dried before being put into the retort. A definite, maximum proportion of alkali was used; an excess prevents complete absorption of nitrogen and a deficiency involves loss (of carbon?). Twenty-five to one hundred parts of potash are used to one hundred of coal, according to the density of the latter. Nitrogen should always be in excess, but must not be passed too rapidly. A certain pressure upon the gas and much friction with the solids through which it passes are favoring conditions.

Newton recommends the use of waste gases from the sulphuric acid chambers after passing through ferrous sulphate and lime water, to remove oxides of nitrogen. The use of these chamber gases has also been suggested by Binks, Firman and others.

Before the date of Newton's patent, however, Possoz and Boissiere had been at work upon the same industrial problem in France and had in operation at Grenelle, near Paris, in 1843, a small plant which was turning out yellow prussiate at the rate of 15,000 kilos, or more than fifteen tons per annum. The high price of fuel and the need of a cheap and abundant supply of highly refractory clay for making the retorts used in the process led them to remove, in 1844, to Newcastle-upon-Tyne, England, where they went into the operation on a large scale, under the patronage and co-operation of Bramwell and Hughes. The works here, in 1845, turned out yellow prussiate at the rate of more than a ton a day. They were run until 1847, and were then abandoned after considerable loss. The salt was said to be produced at the rate of less than two francs per kilo, and was of exceptionally fine quality.

This is the most persistent attempt on record to establish commercially a process for the fixation of atmospheric nitrogen, and as such deserves close consideration.

The process consisted of passing the gas from a coal fire through large vertical cylinders or retorts of fire clay filled with a mixture of wood charcoal and potash. The charcoal was prepared by saturating it with a solution of potash and then drying. Much stress was laid by P. and B. upon exclusion of water in the process. The retorts were kept at the highest possible temperature—a white heat being preferred—as the rate of conversion of potash into cyanide was found to be proportional to temperature. The conversion was commonly completed after ten hours, but 2–3 hours in some cases was sufficient, with a good white heat. The cyanized charcoal was withdrawn at the bottom of the cylinder and dropped into a tank of water containing powdered spathic iron ore in suspension, by which the cyanides were converted into ferrocyanides or prussiates. The solution was finally filtered and evaporated to crystallization. The apparatus worked continuously.

In the French experiments the retorts were seven to eight feet long with walls 2–3 inches In England, much larger and heavier retorts were used. The high temperature in connection with the alkalies, caused rapid destruction to the retorts. They were heated white hot before the introduction of the alkalized coal. White hot flues also served to superheat the nitrogen or surface gases before entering the retorts. In later forms of the apparatus, air was admitted directly to the cylinders, oxygen being removed in passing through the upper layers of carbon. The presence of carbonic oxide or carbon dioxide, as in the fire gases, was found to be disadvantageous. Coke yielded less cyanogen than charcoal. The production of cyanide was said to be greater for a given weight of potash than by the old prussiate process. The alkalized charcoal contained 30 per cent. of potash. Soda was found inferior to potash and required a higher temperature. Water, even in small quantities, hindered the production of cyanogen. This fact was ascribed by P. and B. to decomposition of the latter by water to form ammonia.

In the latest constructions the cylinders were 10 feet in length and 2 feet in diameter with walls 9 inches in thickness. These were built of fire brick and their massive character enabled them to retain heat and to resist wear so as to last several months in use. Lateral slits were also made in the walls of the cylinders for admission of air direct, and through these slits the contents could be stirred to prevent clogging by fused potash which had been one of the chief obstacles in the process. The current of gas was upward and the charcoal was fed in at the top in moist condition and dried thus by waste heat. A pump drew the gases through the cylinders.

The causes of failure assigned in England were the rapid destruction of apparatus owing to corrosion of the retorts by the alkali, and the great loss of alkali by volatilization, or absorption by the cylinders. Much potash was wasted in the fine charcoal after lixiviation or converted into silicates and other salts useless for further application in the process. Bramwell patented some of the latter improvements of P. & B.'s plant which were devised by him. He preferred to convert oxygen of the air into carbonic acid rather than carbonic oxide before crarying it into the cylinders. The use of lateral slits is also a feature of his patents.

This process is said also to have been applied at several places in France, but was ultimately adandoned.

R. Laming in 1843 patented a process for manufacture of hydrocyanic acid by passing ammonia through red hot charcoal.

Swindell in 1844 patented a process in which nitrogen or air or oxides of nitrogen were passed through charcoal or other carbonaceous material, heated to full redness in a perfectly closed retort. If ammonia is to be formed, steam is mixed with the nitrogenous gas.

J. Laming obtained a patent in 1845 (for another partly), by which charcoal or other form of carbon in powder is mixed with alkali and the mixture is kept in fusion while a current of ammonia is passed through it for the production of cyanides.

Bunsen proposed the construction of a furnace for the production of cyanides on the plan of the blast furnace. It was to be charged with alternate layers of coal and alkali and the fused cyanide was to be drawn off periodically at the bottom. No industrial application of this idea is known, although Binks is said to have taken out a patent for a similar furnace.

Armengaud patented in France, in 1846, a furnace for manufacture of cyanides from the nitrogen of the air. Unlike P. & B. he regards the presence of steam as favorable to the process and prescribes its regular admission to the furnace. The charcool, which must be in excess, is intimately mixed with potash, soda or lime, the mass is heated to a cherry red and over it is passed a mixture of furnace gases and steam. The absorption chamber resembles a reveratory furnace. The product is leached with water at 75–85°C. The volatile products from the furnace are carried into a solution of ferrous sulphate.

F. Ertel in 1846 took out a French patent for a process very similar in principle to the above, involving the use of steam, or better as the inventor says, of hydrogen. Air from a coal fire is passed through a column of coal or coke heated to a cherry red and from this through a mixture of charcoal powder and alkaline carbonates or lime, also heated to cherry red. The distinctive features of Armengaud's and Ertel's process are the use of steam and the application of a comparatively low temperature, whereas Possoz and Boisseire insisted upon a white heat and the exclusion of steam, as essential conditions.

The history of later attempts to use the nitrogen of the air for the manufacture of cyanides, shows, up to the present time, no commercial success. The few further plans or suggestions bearing upon the questions are added here as having a possible bearing upon the future study of it.

Margueritte and Sourdeval in 1862 found that when air is passed over a hot mixture of baryta and carbon, nitrogen is absorbed freely, forming barium cyanide, and that this compound in presence of steam at 300° C yields ammonia. In another form of the process they passed a mixture of illuminating gas and nitrogen over a mixture of coal and barium carbonate. The resulting barium cyanide was decomposed in solution by potassium sulphate. They also used iron filings in one of their methods similar in other respects to the foregoing. This process, which seemed to promise much for the industrial uses of nitrogen, has never received any commercial application, even as a source of ammonia. English patents for the process were taken out by Clark.

Diess in 1873 patented in France a method for the manufacture of cyanides which differ in no essential feature from that of Possoz and Boissiere.

S. Q. and A. Brin, in 1883, patented a process for manufacture of ammonia by passing moist nitrogen over coke containing baryta, which recalls that of M. and S. They also utilized oxygen separated from the air by another process.

Berthelot, in 1868, made a valuable contribution to the theory of the synthtsis of cyanogen. He obtainad acetylene ($C_2H_2$) by direct combination of its elements (under the influence of the electric spark) and converts this in presence of nitrogen by the same means into hydrocyanic acid (HCN) he says

(Continued on page 60.)

## DYE MARKET

**Note**—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

*The prices current will be found on page 50.*

TUESDAY EVENING, Aug. 27, 1889.

The tone of the general market for dyes and dyestuffs cannot be said to have materially changed from a week ago. In the majority of instances the demand continues of the moderate jobbing kind, while prices have fluctuated but little. The recent failures in the woolen industries have been the means of creating rather a feeling of uneasiness among dealers, but the worst is believed to have been past, by some, while others say that in their opinion "the end is not yet."

Albumen—The market is reported very firm at the moment, and dealers do not seem anxious to consummate any large sales, owing to the is faith in higher prices.

Aniline colors have continued to find a moderate outlet, the trading being wholly of the jobbing description. Prices are ruling easy, but there have been no important changes and no features are apparent.

Alizarine has continued quiet though quoted with steadiness. No items of interest can be noted and no changes in values have been effected.

Bichromote of potash has been taken in the customary manner for consumption, but there has continued a lack of special trading, while the ruling figures of a week ago continue to represent the market.

Cochineal has sold in a small way only, the trading still being of only retail proportions. Former figures are quoted.

Cutch.—The market continues to drag, there still being but little interest taken in the article on the part of buyers. The business has been in a small jobbing way entirely, resulting in the changing hands of probably 200 bales at prices in the neighborhood of 5¼c, according to quantity.

Divi Divi.—The market is plentifully stocked at the moment, and but few parcels have been placed, since we last wrote. Values are ruling low supplies being obtainable within the range of $35@50, as to quantity and kind.

Dyewoods—The stickwood market continues to rule with firmness, notwithstanding the reports of the settlement of difficulties at the base of supplies. In our editorial columns we review the situation at length. The following sales are given us: 150 tons Gonaives, 200 tons St. Marc and 100 tons Port de Paix, all sold at $34. This figure also represents the lowest price at which supplies are now offered. There has been nothing of any moment doing in extracts, in the way of trading, while the market is still easy and prices in buyer's favor. The recent failures in the east have further demoralized the market and created quite an uneasy feeling.

Gambier is still in a strong position with little prospect that the market will ease up for some little time at least. We are informed that all the supplies on the Egyptian Monarch and the Holland have been placed, as have also those arriving by a recent steamer at Boston. It is further stated that about ¾ of the stock on the Edward Kidder has also been disposed of to consumers. The spot supplies are reported as rather scarce, and the market for spot and September deliveries has been further strengthened by the strikes in London, which precludes the possibility of anything being shipped from that port at the present time. It is said that certain parties are rather inclined to sell future deliveries cheaper, because of the fact that supplies generally come into Singapore at this time.

Indigo—Interest, at the moment, is centered on the advices from the primary markets regarding the condition of the crop. In the line of trading the market has only been moderately active, no large orders having been placed. Prices are firm, but unchanged. We are indebted to Messrs. Howe, Balch & Co. for the following, dated Boston, August 23, 1889:

By cable received to-day from our Calcutta house, the crop is now estimated as follows:—

| | Maunds. |
|---|---|
| Lower Bengal..... ..... ..... | 000 |
| Behar. . . ..... ..... | 69, |
| Benares.... ..... ..... ..... | 12,000 |
| Northwest Provinces, Oude and Doab.... | 37,000 |
| Total..... ..... ..... ..... | 144,255 |

also to Messrs, F. W. Helgers & Co. for the following, dated Calcutta, 9th August, 1889: Latest crop advices state, Lower Bengal continues unsatisfactory, with the exception of Moorshedabad. Behar.—Weather still unfavorable; manufacturing returns indifferent. In Tirhoot and Chumparun the second cuttings do not promise well. Benares and Doab—Prospects good; yield of plant satisfactory. Exchange for the season 6 m s., 1. 4⅝.

Nutgalls.—We are given sales of 100 cases on spot at about 15c, which it is said cleans up pretty much all the inferior lots which were on the market. The Antoinette has arrived with supplies to the extent of 135 cases, all of which were placed previous to being received. Allepo galls continue without feature, being n fair request.

Prussiate of Potash:—All grades have sold moderately, and at previous figures in all instances. We are unable to note any features.

Sumac.—Sicily is reported in rather better demand, and sales aggregating several hundred bags are given us at previous quotations. Virginia has moved slowly, buyers simply supplying pressing needs. Recent advices further confirm the reports of damage to the new crop, but say the damage by rot will in all probability be confined to that growing in the lowlands, but say that no estimate can as yet be given as to the amount involved.

Starch—All grades have ruled firm during the interval, more particularly for potato. Some little trading has been accomplished, notwithstanding the recent failures among the mills, the demand coming principally from points west of this city. Values are unchanged, though held stiff at the ruling quotations.

Tin crystals have continued to sell fairly well, in a jobbing way and are quoted at previous figures, with the market ruling steady.

### Boston Notes.

[Special correspondence of OIL, PAINT AND DRUG REPORTER.]

BOSTON, August 24, 1889.

Secretary Albert E. Carr, of the Paint and Oil Club of New England, received a circular bearing the date of August 8, from Mr. Hersey B. Goodwin, president of the Boston Executive Business Men's Association, relative to the desire of the Senate Committee on relations with Canada, to hear, at the meeting to be held in Boston about September 1st, the opinions of the business men of Boston, representing the various public interests of New England, in regard to the general subject of our relations with Canada. Mr. Goodwin urged that the matter should be brought to the attention of the Club as soon as possible, and a meeting was accordingly called for 3 o'clock P. M., on Monday of last week. The attendance was very small, and the only action taken was the appointment of a committee which shall take the matter into consideration at a meeting of the committee to be held between now and September 7, and report upon the same. This committee consisted of the following: John C. Howe of Howe & French, chairman; William B. Bird of J. & W. Bird & Co.; and A. D. McClellan of Jerome Marble & Co.

A rumor was published in the Boston daily papers to the effect that Mr. James H. Prince, Boston manager of the Eckstein White Lead Co., had been made manager of the business in New England of the lead combination. I called upon Mr. Prince and interviewed him about the matter. He was pleased to give any desired information, and stated emphatically that there is not the slightest particle of truth in the rumor referred to. He is not, he said, and has not been, appointed the New England manager of the combination. Mr. Prince is the president of the Salem White Lead Co., the Eckstein White Lead Co. and the Salem White Lead Co. having been consolidated; both are hereafter to be conducted under the name of the Salem White Lead Co. It is only the New England business of the Eckstein company, by the way, that has been united with the Salem White Lead Co. The goods of the Eckstein company will remain the same, the only change being in the name.

The general jobbing market in paints has a very good undertone and the prospects are decidedly in favor of an improvement in a few weeks.

The linseed oil market looks as though it might recede soon. It depends largely, of course, on the incoming crop of seed. While the trade are unable to learn much about the crop of seed, they know enough, they think, to justify them in expecting that linseed oil will be lower in price. Trade is rather quiet, and stocks in jobbers' hands are low. The demand is good, but from hand to mouth.

Turpentine has a strong market, and the trade think that higher prices are probable, There is no surplus stock here in Boston.

Until this week there had been considerable activity in the shellac market, but at present the feeling is quiet. Prices are pretty well up and firmly held, and sales are being made at the ruling prices. Quotations at the moment are as follows: D. C. 28@29c, V. S. O. 20½@24c, Diamond SS 20½@21c, T. M. quality 17½@18c.

For bleach, the market is quite steady at $1 70@1 75, according to brand and position. Arrivals to Boston of late are light and stock on spot is limited. Holders see no reason for expecting either an advance or a decline in the market.

The long expected change in cream of tartar has not arrived yet, and the market remains quiet. Sal ammoniac continues in statu quo. Dealers report indications of an advance in nitrate of soda. Already there is a strong advance in the market abroad, but as yet there is no change in the market here.

In the chemical market a slight improvement may be reported, though nothing new can be said of prices, farther than that they are steady.

Aniline colors are moving freely, and prices are still firm. Cochineal is dull, Tin crystals are quiet, with prices steadily held.

Gambier has gone up ¼c on spot this week, and 7¼c net cash is now the lowest figure ex vessel or steamer to Boston; and 7⅜@7½c is being asked for small lots. There have been arrivals of about 2,700 bales during the last


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week, over 700 bales of which are offered for sale, the balance going into consumption. Stock to arrive within the next twenty days is firmly held at 7c. Cube gambier is quoted at 9c for No. 2, while the market is unchanged for No. 1. There have been no arrivals of sumac recently, and the Sicily stock in the market is now very low There will be no arrival of sumac in Boston before the first of October. Virginia sumac is in limited supply, with a fair jobbing demand at $48@50. Grinders in Virginia are very much adverse to making contracts for this season's delivery; and the report is that the extract manufacturers are buying freely of leaf.

The cutch market is in a dull state and unchanged; prices are firmly held. Quotations are the same as last week.

Dyewoods are in light supply and the market inactive. Fustic is scarce and the prices strong. Sapan wood is not much offered, and supplies are rather light. Cam wood is in little demand. The market for logwood is quiet with a slight upward tendency. Since the arrival of the "V. T. H." the arrivals of logwood have been: ex Edward Kidder about 150 tons; Samuel B. Hale, about 500 tons; all from Jamaica.

Lard oil is easier. Saponified, cod, olive, neatsfoot, palm and paraffine oils are steady. Elaine and castor oils are quiet, with the supply ample and in the market in buyers' favor. Cottonseed oil is firmer all around on the claims of smaller holdings of late. Sperm oil is easier.

Essential oils present some few changes, with a strong market generally.

Glue stock shows a very dull market, and there is no improvement worthy of note,

There is an improvement in the jobbing trade in drugs, and a steady market. There is a good demand for quinine, and prices have advanced. Opium is a little firmer.

Boston parties have leased the oil factory at Long Point, Cape Cod, and will run it under the name of the "Cape Cod Oil Works." with Lorenzo Richardson, of the firm of Loftus & Richardson, oil dealers, Boston, as superintendent. Mr. Richardson has associated with him Mr. Benjamin Randall, a prominent Boston oil man. They will manufacture porgy oil largely,

Henry A. Choate, the large drug dealer in Boudoin Square, has sold out, and I believe it is his intention to become the head of a concern to be known as the "Choate Drug and Chemical Company."

A delegation of Boston gentlemen of the paint and oil trade, consisting of Mr. John D, Morton, of Carpenter, Woodward & Morton; Mr. George L, Gould, of Gould & Company, and others, made a call upon Postmaster-General Wannamaker, while he was at the Hotel Vendome in this city, on his way to Newport. Mr. Morton presented to the Postmaster-General some defects in the service, more especially the delay, in the Western mail to Boston. Mr, Morton is Chairman of the Postal Committee of the Boston Executive Business Men,s Association, and a member of the Paint and Oil Club of New England. He expects to take a trip to Europe soon with his family.

Mr. George L. Gould, of Gould & Company, and family, are to pass the remainder of the season at Saratoga. ALLAN ERIC.

### Transporting Petroleum on Camels.

While in the field last week I met Mr. G. B. Reynolds, of Bombay, who is making a tour of investigation through the oil and gas fields of America in company with R. A. Townsend. These gentlemen are civil engineers, representing the Indian government, and are looking into our methods for producing and transporting oil, with a view of establishing the same system in India, in certain localities of which oil has been found in small quantities.

In conversation with Mr. Reynolds, he said: 'We have some wells producing oil 43 miles from Baba Kuch station on the Harnai line to Omeka. The last eight miles is up through an almost impassable gorge, and this is the great obstacle to the easy transportation of our petroleum. What we are particularly interested in is your method of transporting oil, and we are studying out the system in every detail."

"What is your present method for transporting petroleum?" I asked.

"The Government has in use a large number of camels and drivers. Two small steel tanks are ingeniously strapped together so that they can be suspended from the back of the animal on each side. These receptacles are filled with oil, and the herd of camels is driven down through the gorge and then to the railway station at Baba Kuch."

"What is the extent of your oil territory?"

"That remains to be seen. We have only a few wells producing. The oil is of a very thick quality. The Government has learned that there is a saving of 70 per cent. by using it as a fuel on her railways, and our fields will be developed to their fullest capacity. Incited by Russia's progress in the construction of railways in the East, the British Government intends building several roads through its domains in India, and you see we will have full use for what petroleum exists there."—*Toledo Commercial.*


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## The Fixation of Atmospheric Nitrogen.

(Continued from page 57.)

thrt when nitrogen acts upon a highly heated mixture of nitrogen and potash, the compound potassium acetylene ($C_2 K_2$) is first formed and that this, by direct union with nitrogen, forms two molecules of potassium cyanide (K C N).

J. Blair, in 1878, patented an apparatus in the United States for manufacture of cyanides. Gases from a coal fire (a stack with a deep layer of coal) are drawn over a layer of heated iron ore to form carbonic acid by oxidation of the carbonic oxide. The former is absorbed by passing the gases through milk of lime, and the resulting nitrogen is carried to a holder. The nitrogen is then carried upwards through a hot mixture of potash and charcoal in a stack heated externally by a fire in a larger stack which encloses it. The charcoal is drawn from the bottom and leached. Fumes of potassium cyanide which escape from the stack are condensed in a chamber adjoining and the lighter fumes are absorbed by a solution of a salt of iron.

Walter Weldon, in 1879, obtained a patent in England for the manufacture of cyanides. He finds that the temperature necessary for absorption of nitrogen by alkaline charcoal is not so high as has been supposed. Instead of a white heat, Weldon finds that a comparatively low temperature, a bright red or even a lower heat, suffices to produce cyanides from mixtures of alkalies or alkaline earths with carbon in presence of air. His apparatus consists of a rotary furnace similar to that used in preparation of black ash (soda ash).

V. Alder, in 1881, brought forward a method involving some new features. Oxides, hydrates or carbonates of the alkalies or alkaline earths with charcoal are used to absorb nitrogen prepared by passing air or fire gases through solutions of potassium or barium sulphide or by passing air over iron, copper or zinc. He asserts that presence of finely divided metallic iron is useful in the process and supplies this by saturating charcoal or coke with a solution of ferrous sulphate and then igniting it in a current of hydrogen. Sulphates and sulphides of the alkalies are also used, together with lime, in place of other alkaline bodies above mentioned. In a later patent the admixture of hydrocarbon gases or carbonic oxide with the nitrogen is recommended; also the fuel in fragments is coated with a pasty mass made by mixing a strong solution of a soluble salt with charcoal powder, sawdust, etc. These modifications are introduced with the object of increasing the surface available for absorption of nitrogen.

Ludwig Mond, in 1882, obtained a patent for manufacture of cyanides and ammonia by calcining, out of contact with air, a mixture of carbon, barium carbonate, or oxide, and magnesia, previously compressed into blocks, and then exposing these heated blocks to a current of nitrogen. In an improvement he first heats the nitrogenous gas by passing it through hot barium salts and then passes it through fresh layers of barium salts and carbon at the temperature required for forming cyanogen compounds.

Fogarty, in 1883, took out two patents in the United States for production of cyanides and ammonia, which consisted essentially in dropping a mixture of powdered carbon and alkali into superheated furnace gases or superheated "generator gas" (a mixture of nitrogen, hydrogen, carbon dioxide and steam), whereby cyanides were produced, which were subsequent y decomposed by steam, yielding ammonia. He also obtained two similar patents in 1887. In one of these processes the mixture of superheated furnace gases or generator gas is mixed with steam in excess, with the object, as explained by the author, of first producing cyanides and cyanates, and then, in the same mixture, decomposing these by the steam present to produce ammonia.

In the second of these patents both air and steam are in excess. Cyanides are supposed to be produced, and subsequently decomposed by the excess of steam to produce ammonia. The latter in presence of carbonic acid of the mixed gases is supposed to form ammonium carbonate, and this is said to be decomposed by gypsum, yielding calcium carbonate and ammonium sulphate. These processes have been tried on a large scale experimentally, but are not as yet commercially successful.

J. Young, in 1884, patented a process for cyanides intended to meet the difficulty hitherto encountered in the rapid destruction of the apparatus. He proposed to use magnesian limestone or other suitable basic substance for constructing the retorts.

Siepermann (1887) obtains cyanates by passing ammonia over a mixture of barium carbonate with alkaline carbonates. For cyanides he adds coal powder to the mixture. He gives the results of experiments, showing the effect of temperature upon the production of cyanides. Excessively high temperatures yielded poorer results than a moderate red heat.

Dickson in 1887, patented a process for production of cyanides and ammonia by injection of a mixture of air, steam, coal dust or hydrocarbon vapor, and powder of alkalies or alkaline earths, into a chamber heated by the combustion of the injected, finely divided fuel alone. His method also contemplates the maintaining of pressure (one to three atmospheres) in the furnace.

THE FORMATION OF METALLIC NITRIDES.

R. Wagner in 1857 had suggested that nitrides of boron and silicon in the interior of the earth might be the source of the ammonia found in combination with boric acid in the lagoons of Tuscany and as sal ammoniac in volcanic exhalations. This ammonia may be a product of the action of water at high temperatures upon the above nitrides. Bunsen, however, and Rainer, regard volcanic ammonia as of organic origin, resulting from action of subterranean heat upon fossil vegetable matter, coal, lignite, etc.

Briegleb and Geuther in 1862 investigated the question of the metallic nitrides. The close relation of these bodies to the cyanides renders a knowledge of them of much interest in this connection. Nitrides of magnesium, aluminium and chromium were obtained by simply heating the metals in pure nitrogen. The temperature of combination of nitrogen with the metal seems to be near the melting point of the latter. Magnesium nitride is a greenish yellow, amorphous mass which yields ammonia in contact with water or caustic alkalies, and yields cyanogen when heated in an atmosphere of carbonic oxide, or carbon dioxide. It has the composition $Mg_3 N_2$.

Tessie de Motay in 1872 announced that titanium nitride could be made to yield ammonia by the action of steam and could then be regenerated by submitting it to a current of nitrogen and the action thus alternated successively.

Mallet in 1876 obtained magnesium nitride by the combustion of magnesium powder in a crucible with insufficient admission of air. Other nitrides, of boron, titanium, silicium, etc., have been investigated by Ufer, Uhrlaub, Wohler, Deville and Caron.

CYANOGEN FROM OXIDES OF NITROGEN.

Binks proposed to use oxides of nitrogen or vapor of nitric acid for production of cyanides. The gases were brought in contact with vapors of hydrocarbons in passing though a highly heated cylinder filled with firebrick. When the nitrogen compounds are in excess ammonia is chiefly produced, but with hydrocarbons in excess cyanides are the principal products. Crane and Julilon used a somewhat similar process, using, however, an excess of water gas (hydrogen and carbonic oxide) mixed with the oxides of nitrogen and hydrocarbon vapors, and passing the mixture over a hot catalytic substance (platinized asbestos) at a temperature of 600° F.

Firman and others have proposed the use of waste gases of the sulphuric acid chamber (nitrogen, oxides of nitrogen, etc.) for the same purpose.

A process suggested by Roussin in 1858 uses oxides of nitrogen in a different way and recalls the very early methods of Diesbach and Woodward. With the object of converting nitrates into cyanides he made the following experiment: Four equivalents of crude potassium acetate were mixed with three of potassium nitrate (nitre) and five of potassium hydrate or carbonate, and heated in a porcelain crucible to 350° C. The mass burned briskly, leaving a black residue which, on lixivition, yielded potassium cyanide and carbonate. By addition of coal powder, to make up for the deficiency of carbon in the organic acid, an increased yield of cyanide was obtained, but still short of the theoretical result. Previous reductions of the nitrate to nitrite yielded better results, and a mixture of potassium acetate and nitrite with lampblack gave 2 6 parts of Berlin blue (dried at 100° C.) to 13 parts of acetate, and an ammoniacal odor during the operation showed a loss of nitrogen. Potassium tartrate yielded little cyanide when used to replace the acetate, a fact already announced by Guibourd. Roussin suggested that a commercial process could be based on the use of crude sodium nitrate and acetate.

PRODUCTION OF CYANIDES FROM AMMONIA.

The reactions by which ammonia is converted into cyanidds are so closely related to the direct production of cyanides from nitrogen and offer so many points of suggestion in connection with the same, regarded as an industrial problem, that the history of them cannot be omitted from this summary.

The original experiment, ascribed by Langlois to Scheele, of heating togother sal ammoniac, potash and charcoal and obtaining potassium cyanide may be regarded as the starting point.

Liebig attributes to Scheele the statement, that ammonia passed over hot charcoal yields hydrocyanic acid, but Langlois does not find this in Scheele's writings. What Scheele does say is that when sal ammoniac is heated with vegetable charcoal and potash the mass yielded on lixivation "la lessive du sang."

Clouet in 1791 mentioned that ammonia gas passed over hot charcoal yields hydrocyanic acid. He states that Thenard had noticed that a soluble substance having the odor of bitter almonds was formed under the same conditions. Bonjour, Vanquelin, Buchholz, Schroeder and Ittner all refer to the same fact as based upon experiments in which ammonia or ammonium chloride was heated with charcoal or with mixtures of charcoal and lime or oxide of lead. The product was probably ammonium cyanide, as in later repetitions of similar experiments, but the constitution of the cyanides was not then understood as this was before the date of Gay Lussac's discovery (1814). Clouet reported that hydrocarbons, carbonic acid and nitrogen were set free at the same time, while Bonjour showed that hydrogen was the only by-product, an observation that was fully confirmed by Langlois in 1841. Trommsdorf, however, was first to recognize ammonium cyanide in the products of this experiment.

Kuhlmann found that volatile nitrogen compounds containing all hydrogen or mixed with volatile hydrocarbons, when passed together with carbonic oxide over hot platinum sponge, yielded ammonia. He refers to Clouet's experiment, and shows, by a repetition of the same, that no hydrocyanic acid, but only ammonium cyanide, is produced. Marsh gas ($CH_4$) is separated at the same time. He regards the process of preparing alkaline cyanides as involving first the formation of ammonia, which, in presence of alkali and excess of carbon, is converted into cyanogen and carbonic oxide, Langlois repeated Scheele's experiment with sal ammoniac, but obtained no cyanide. He also obtained ammonium cyanide by passing ammonia over hot charcoal, and called attention to the remarkable way in which ammonium cyanide by passing ammonia over hot charcoal, and called attention to to the remarkable way in which ammonium cyanide resists decomdosition at high temperatures.

The processes of Sacquemyn and Berry in this direction have already been mentioned.

Grager passed vapor of ammonium carbonate through alkaline charcoal contained in narrow iron cyliders 1½ inches in diameter, and obtained 93 to 95 per cent. of the theoretical yield of ferrocyanide. When large and wide cylinders were used the results were much inferior, only 15 to 30 per cent. being obtained.

Brunquill, in 1856, proposed to apply the same principal to the production of cyanides and prussiates. Ammonia, or the vapors from distillation of bones, etc., are passed over hot firebrick and then over hot wood charcoal in pieces of the size of a chestnut. The volatile ammonium cyanide is absorbed by solution of ferrous sulphate in an apparatus of peculiar construction. A portion of the ammonia is recovered as sulphate, and used anew in the process. The precipitated cyanides of iron are converted by potash or soda into prussiates. The advantages of this method are the prevention of waste of potash and of nitrogen. Only moderate temperatures being employed, there is no loss of potash by volatilization, by absorption, or by formation of unavailable salts of potash, all of which occur in the old process. The cost of the ammonia is defrayed by the increased value of the residue when bones are used. The author hoped also to obtain ammonia for the first stage of the process bp passing air and steam over coal.

Levoir, in 1859, noticed that a flame of ammoniacal gas yielded cyanogen (ammonium cyanide) in burning. Fischer questioned this statement, saying that he had repeated Levoir's experiment with an argand burner, and obtained no cyanogen. The fact was verified, however, a few years later by Romily.

H. Johnson, in 1860, obtained in England a patent for a method, devised by J. V. Lucas in Paris, for preparation of prussiates, which consists simply in saturating wood charcoal with potash, solution, drying and heating it to redness in a retort, and passing ammonia over it. The charcoal is mixed also with 5 per cent. of iron filings.

J. Webster, in 1860, patented in England a process for manufacture of prussiates by charring or burning a mixture of sawdust or spent bark and oxide of iron, charging the mixture with potash and passing ammonia through it.

Fleck, in 1863, proposed to make cyanides as follows: A hot mixture of charcoal or coal, sulphur and potash is treated with a definite quantity of ammonium sulphate. Potassium sulphocyanate is formed. Ammonia in part escapes, but is absorbed and utilized. The sulphocyanate is decomposed by metallic iron, yielding potassium cyanide and ferrous sulphide. It was claimed by the author that 94·42 per cent. of the ammonium salts used were ultimately converted into cyanides This process is referred to by Meyer ten years later, 1874, as not being successful in practice.

Gelis, in 1862, manufactured prussiates in Paris after a new method of his own invention, for which a medal was awarded at the London Exhibition of 1862. It consists in mixing, in the cold, a solution of ammonium sulphhydrate ($N H_4 H S$), obtained from gas liquor, with carbon disulphide; ammonium sulpho-carbonate ($(NH_4)_2SCS_2$) is formed and sulphuretted hydrogen. The addition of potassium sulphide to the sulphocarbonate results in the production of potassium sulphocyanate, which by action of iron can be converted into cyanide or prussiate. The by-products, ammonium sulphate and sulphuretted hydrogen, are again used. The process is carried on in a retort and these products are readily recovered. The cost by this process was said by Payen to be within 1·6 francs per kilo (about 15 cts. per lb.) for potassium ferrocyanide.

Meyer, in 1874, remarks that the conversion of potassium sulphocyanate into cyanide by iron is wasteful of nitrogen when fusion is resorted to and incomplete in the cold. The process of Gelis was finally abandoned.

Romily, in 1867, repeated the experiment of Levoir, and improved upon it. Illuminating gas was made to bubble through ammonia and then burned from a jet, and the flame was made to impinge upon a surface of water containing caustic potash in solution. Potassium cyanide was found after a time in the solution. Solutions of sodium and calcium hydrates gave corresponding results. When distilled water was used ammonium cyanide was found in the liquid. The effect was produced only when the flame was luminous or smoky; the flame of a Bunsen lamp yielded no cyanides. Vapors of oils or hydrocarbon gases containing ammonia give similar results. Vapor of water in the mixture of gases did not prevent the formation of cyanides. When iron in fine powder was suspended in the alkaline solution ferrocyanide was formed.

An apparatus was devised to apply the principle industrially. A cylinder of iron revolving on a horizontal axis, dipped into a tank containing an alkaline solution. A pipe, parallel with the cylinder and pierced with holes, supplied ammoniacal illuminating gas, burning in a lice of jets which impinged upon the face of the cylinder. The cyanides were absorbed by the film of alkaline liquid which was continually renewed as the cylinder revolved.

Schwarz in 1869 obtained ammonium cyanide by passing vapor of carbon disulphide mixed with ammonia over hot iron or copper in an iron tube. Sulphide of the metal is simultaneously formed. The vapors are passed into a mixture of solutions of caustic potash, ferrous sulphate and ferric chloride and the resulting mass is converted into Prussian blue by hydrochloric acid, and then by potash into yellow prussiate. Schwarz also confirmed the conclusions of Levoir and Romily as to the production of ammonium cyanide during the combustion of ammoniacal illuminating gas, and he suggests that the purification of such gas from ammonia is, on this account, a matter of the greatest importance.

Frohde remarks that the fumes from burning coal may be noxious, not merely because of oxides of carbon in them, but also because of cyanogen. He claims to have detected cyanogen by its odor where coal was incompletely burned.

E. Meyer in 1874 published a review of the cyanogen industry up to the year of the Vienna Exhibition. He found the old method still the only important one. The problem of making cyanides from nitrogen of the air was still unsolved, and the earlier efforts of Possoz and Boissiere had not even been equalled in its results by the later one of Margueritte and Sourdeval, from which much was at first expected. The methods using ammonia as a source of nitrogen for the manufacture of cyanides has not placed the old method, through dry distillation of animal matters, —which are treated by fusion in the old process—nor by substitution of ammonia salts as source of nitrogen for these substances. Neither had the methods based upon formation of sulphocyanate marked any great success. The production of sulphocyanate is readily brought about by Gelis' method and the process is, so far, a success; but the conversion of this salt into cyanide or ferrocyanide is difficult. It does not stand sufficiently above the usual raw materials (animal matters) used for this purpose, in its proportion of nitrogen, to counterbalance the disadvantage which it offers in comparison with its high proportion of sulphur.

N. Maxwell-Lyte patented in 1875 a process for manufacture of ammonia by bringing nitrogen in contact with nascent hydrogen liberated in the presence of a triad or pentad element.

Tscherniak and Gunsberg in 1878 patented a method in Germany for the manufacture of cyanides similar in principle to that of Schwarz. Two parts of ammonia water of 85 per cent., and one of carbon disulphide are put into a tight vessel, heated to 110° C. below and cooled above so that a continuous distillation of the volatile substances occurs. After three or four hours the mixture is found to be converted into ammonium sulphocyanate sulphuretted hydrogen. The ammonium salt is converted into calcium sulphocyanate, which, by action of an alkaline sulphate or carbonate, yields the corresponding alkaline salt, and this, by heating with coal, lime and iron, yields cyanides or prussiates. The ammonia is recovered and used again.

Graham Young, in a process for the manufacture of ammonia patented in England has suggested the use of electricity to effect the union of nitrogen and hydrogen. The principle had also been mentioned in an English patent issued in Chisholm and Kent in 1860. No practical result has as yet come from these suggestions.

Dufrene in 1880 patented a process in England for the manufacture of ammonia by combustion of zinc in air, in presence of an alkaline hydrate. Hydrogen and nitrogen are both set free and combine to form ammonia under the influence of a porous lid, such as iron or platinum sponge in a heated state.

Twinch in 1881 proposed to manufacture ammonia by using oxide of nitrogen to remove oxygen from air; the resulting nitrogen is brought in contact with nascent hydrogen from the decomposition of steam or of alcaline hydrates by metals, to produce ammonia.